The Builder.

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What we may get from Foreign Countries.

OULD we have extended our notice of the mineral products, and other materials to be used in building, we should have found in several of the foreign divisions of the late Exhibition, much that the interests of architects and builders would have been, and are, concerned with. British engineering finds occupation in every country; hence it must know, or be able from previous insight to ascertain, what are the resources of each locality; whilst, as means of transport are extended and improved, and barriers of commerce swept away, many products of foreign countries will be available in the construction and architecture of buildings in the United Kingdom. The wealth of our country in products of the earth applicable in building, is mineral wealth: but even of iron we import some of particular make from Sweden; whilst one of the remarkable collections of specimens of iron or steel in the Exhibition was that in the Zollverein Division, of Krupp & Co., which included, besides enormous masses of cast steel, tires and axles such as are supplied to some of the English railway companies. In marbles, as we have had occasion to observe, we are richer than was made apparent by the collection in the Eastern Annex; but, whether considering the small scantling of some that we have, or the variety and beauty of those of other countries, we cannot be considered at all independent of foreign supplies. In cementitious materials, the French Division, small as was its collection of building materials in general, showed that we might derive both the materials, and hints as to use, from France. We have already mentioned the collections of minerals in several of the foreign divisions; but we can scarcely have drawn attention to the importance of some of those from certain countries which appear to be advantageously placed for exportation of their products to England. Amongst such countries is Portugal.

Portugal is rich in metallic ores and building materials of many kinds. The collection in the Exhibition, besides anthracite and lignite, comprised upwards of 350 specimens, including minerals of copper, tin, argentiferous lead, antimony, zinc, and manganese; marble, as white, yellow, red, green, violet, grey, black and many other varieties; limestones, granites, slate, and some other materials. A special catalogue, compiled (in French) by Senor J. A. C. Das Neves Cabral, Inspector of Mines, Member of the Commission, was printed; but was not, we believe, on sale. Probably a copy could be procured here through the Portuguese Ministry or Consulate. This catalogue is excellent in arrangement and information; but to allow the proper value of it to be derived, the specimens themselves ought to be preserved in London. The prices are given in English money. The Cintra marbles, rose, blue-gray, and black, now cost, with the carriage to the place of embarkation at Lisbon, 6*l.* 5s. 4d. per cubic mètre; and this may be taken as an average; though white marbles of Portugal may reach three times such price. Great portion of the sum is probably the cost of carriage; but this latter item, in several cases, is likely to undergo reduction, through improvement of the roads, which is in progress. A table in the Portuguese Court, containing 96 specimens of marbles, was priced 44*l.* 9s. The cost of bringing the marble, or other material, from Lisbon to London, would, we learn, be 16s. a ton, for any small quantity. In the same collection were samples of the Massapez *pouzzolana* of the Azores, which has been favourably reported on at the Ecole de Ponts et Chaussées in Paris, and has been highly esteemed by English engineers in Portugal. Our particular attention has been called to it. One material (we believe it was this, and not hydraulic lime) was some short time ago sent from Portugal, by an engineer, a competent judge, with a view to its use in the works of Westminster Bridge. On arrival, however, it was found to have no longer the original properties; and we are told that the reason of the failure in the application of that material here, has not been ascertained. It were much to be desired that the question should be cleared up. All that we now know is that the engineer who had proved the value of the material in Portugal, was compelled to admit the failure, and had to bear loss. The proportions used in Portugal, are three of the *pouzzolana* to one of Lisbon lime.

The Spanish collection of "Mining, Quarrying, Metallurgy, and Mineral Products," forming Class 1, comprised under that head, 200 specimens, which included a great variety of ores, cast and malleable iron, and other metals, marbles, serpentine and jasper, cements, bitumenous substances, and other materials. No information is attached to the titles in the corresponding part of the Spanish Catalogue. At the end of the volume, however, is a special catalogue of a collection of minerals and metallurgical products of the Huelva mining district, and an addition to it, which appear to refer to about 280 specimens; and there is also a list of "Metallurgical Products from the National Establishment of Rio Tinto," 98 in number. These latter, special, catalogues supply some useful information. But, though it is understood the several collections had been made with much judgment, and at great cost, to represent the resources of a country which we have every authority for saying is one of the richest in Europe in minerals, the specimens remained, the major part of them, to the close of the Exhibition, unpacked; and those which were visible had to be looked for in the gallery. In Class 31, "unoxidizable nails" were exhibited, besides, according to the English Catalogue, and to Mr. Hunt in his Handbook, "Iron decomposed without losing its elasticity," and "Casting in unoxidizable iron," both of which the competent authority named confesses to "a very imperfect understanding of." We do not find these titles in the Spanish Catalogue. Spain is likely to become an important coal-mining country.

Class 1 in the Belgian Division, was rich in specimens from the productive country it represented. The first number of the thirty-one in the class, was attached to what may be considered the most important feature of the whole division, namely a collection of specimens, about 1,200 in number, of the constituent rocks and mineral products of Belgium, exhibited by the Ministry of Public Works. The specimens were collected, and classed according to the system of strata-division of the late Professor Dumont, by Mr. Jules Van Scherpenzeel Thim, engineer of mines, of Liége. Dumont's classification and nomenclature do not receive the approval of all English geologists. The special catalogue however, which there is in the Belgian volume, of this collection, should be studied by every one desirous to be informed of the nature of the products of Belgium, or who would visit the country after having preparation made. It was, we think, Dr. Johnson, who said that a man who would bring back much knowledge from foreign countries, must take much with him; and if we assume that some acquaintance with the geology of a country should be an aim in the preparation,—and if the intending traveller have followed up the appreciation of the dictum of Johnson with the reading of the "How to Observe" of the late Sir Henry de la Beche,—he could hardly do better, if Belgium be his field, than take this catalogue as a text-book and guide. It has the titles of the specimens each inserted in its proper place under the head of the geological formation; whilst, opposite the title, is the designation of the *commune* from the soil of which the specimen was taken. Interspersed with the titles, are notes supplying information and statistics,—as concerning the yield of the mine or locality, the period of *exploitation*, the price of the material, and much besides. A collection of the hydrated oxides of iron, and specimens of the charcoal iron made from them, exhibited by Mr. E. Amand, of Mettet (Namur); rolled sheet iron of various manufacturers; minerals of iron, zinc, lead, cadmium, antimony, silver, and others; black and red marble, and slates, were amongst the objects exhibited in this class. Much of the sulphuric acid made in Newcastle is manufactured from ores obtained from Belgium, which contain sulphurets. Bricks, tiles, and cements were exhibited in Class 10. The hydraulic cement of Messrs. Josson & Delangle of Antwerp, costs on the quay at Niel 40 to 50 francs the cubic mètre, according to quality, exclusive of packing in sacks or barrels. Portland cement weighs somewhat less than one third more than this Belgian cement. The same parties supply bricks, red and blue, which cost in ordinary years 5 to 7 francs the thousand, placed on board the vessel at the quay of the manufactory; but the bricks are now selling for 8 to 11 francs. In this class, were several marble chimney-pieces for English fire-places.

We must refer our readers to the Special Catalogue of the Mining and Metallurgical Products, Class 1, of the Zollverein Division, compiled by Dr. Herman Wedding, for information respecting the wealth of Northern Germany in combustibles and ores, and respecting the rocks and earths used for building purposes, hoping that this valuable body of printed matter may be somewhere obtainable. We believe the fact is not generally known,—for, the Commissioners, too little regardful of the most important objects of the Exhibition, have omitted properly to announce it,—that the Official Illustrated Catalogue, which was at first limited, as announced, to the British Division of the building, now includes (as bound) several of the foreign catalogues. Whether it includes all, we should not say, recollecting that many of them which are of small size, would have required to be reprinted; and we do not know where the volumes which appeared for some days before the closing of the Exhibition, on the stalls, are now to be bought or referred to. If our readers, however, can now get at the Special Catalogue of Class 1 of the Zollverein Division, — a large-paper pamphlet, of 106 pages, which was to be had gratis; not the Zollverein General Catalogue that was sold for a shilling,—they will see that it comprises a body of statistics and information compiled with industry and care not to be surpassed. Unfortunately, again, the information now given by such a catalogue is incomplete, wanting the collection of specimens, to which in this case we must add the equally important maps. The quantity of the iron ores is immense in the Zollverein, says the authority; but Nature has separated these ores from the fossil combustible; which we judge must be also in large quantities. But great exertions are being made to improve the communications by railroads and canals: thus the people of Northern Germany hope to regain what they call their ancient pre-eminence. The metallic ores include those of iron, argentiferous and auriferous lead, zinc with cadmium, copper, tin, nickel, bismuth, quicksilver, antimony, arsenic, manganese, and other metals. The works for the production of the metals from the ores are variously located, some of them being in the neighbourhood of the coal, others that of

the ores, and others that of the lines of railways, or the courses of rivers or canals; whilst the older works in particular are placed conveniently for use of water-power. The contributors of the Zollverein were divided into four principal groups, viz., Rhenish Prussia and Westphalia, Prussian Saxony, Prussian Silesia, and the other countries of the Zollverein. The iron-works of the Zollverein may be divided into four classes,—as pig-iron works, or blast-furnaces; founders' works, or those for the production of castings in iron; smiths', or wrought-iron works; and works for the production of steel and steel-manufactures: though, some of the establishments carry on more than one of those branches. The pig-iron works are in Rhenish Prussia and Westphalia, and Silesia; and are to be divided into blast furnaces which use charcoal, exclusively or with other fuel, and those which use coke. The Rhenish Prussian and Westphalian works which sent specimens to the Exhibition, produce chiefly the lamellar pig-iron for steel-making, called *spiegeleisen*, the material worked by Krupp and others. These works, originally, used charcoal; but since the opening of railway communication with other parts of the country, coke also has been used by many of them; and the pig-iron so produced is considered not in any degree inferior to the pure charcoal-iron. Castings in iron that may be classed as works of art, were sent to the Exhibition from the Grand Duchy of Hesse, from the Iron Foundry in Berlin, and from works in other parts of Prussia. The wrought iron, at least in Silesia, is some of it made with charcoal, and some with coal. Contributions from wrought-iron works in Nassau and Hesse, were amongst the specimens in the collection. The lead, silver, and gold works, and the zinc works which contributed, are in Rhenish Prussia and Westphalia; and the copper works are in the same localities, in Prussian Saxony, and Silesia, and in Nassau, Hesse, and Luxembourg. The specimens of rocks and earths, were classified into those used for building purposes, as walling; for roofing, for works of art, for cement, and for millstones, and into clay and sand; fluor spar, and heavy spar and minerals used for different purposes; rocks used as fertilizers of the soil; and rocks and earths used as colours. Bavaria, the Kingdom of Saxony, Baden, and Oldenburg, besides the other provinces and countries named, were contributors. The building stone sent from Rhenish Prussia and Westphalia was sandstone, basaltic lava and basalt, limestone and granite. Only some specimens of granite, we believe, came from Bavaria. The roofing materials were slates from Rhenish Prussia and Westphalia, from Nassau and Hesse. Some of the roofing-slates are described as of English square shape, and others of German rounded shape. The Belgian slates, from Luxembourg, we may observe, have some of the names of sizes corresponding with those of our own slates, as "Marquise," "Duchesse," "Comtesse." The German slate, like that of Wales, is used in the form of slabs for other purposes than roofing. The Rhenish, Prussian, and Westphalian marbles, in the form of slabs of ¾ inch to 1 inch thick, for tables, are quoted at 2s. to 3s. per square foot. Asphalted pasteboard as a roofing material, was sent from Mecklenburg-Schwerin. The Solenhofen Company, of the place of that name in Franconia, Bavaria, contributed specimens of the limestone which is most in repute for lithographic purposes. The Society of Arts used to offer annually a premium for the discovery or *exploitation* of stone equal to this Bavarian. We know not what attention has been given by lithographers to the specimens of materials; but the Exhibition contained in more than one of its divisions, specimens said to be equal to the German stone. The best we saw were those from Canada. The German contributions also included many specimens of Portland and Roman cements, so called.

The merits of the Austrian Division of the Exhibition are now generally admitted; and we have once or twice spoken of the catalogue. It was really the pattern-work of the kind; and it was obtainable at a sufficiently early date. It reached that which should have been universally sought for,—the supplying general information respecting the country, and each class of articles, and the filling up the omissions alike of those who were and those who were not exhibitors. The statistics of the empire were clearly and succinctly given. We might see that Austria has almost every kind of mineral wealth. One fifth of the general maritime trade with foreign countries lately, has been with Great Britain. Notwithstanding that rapid progress, especially since 1852, in the scale of production, is attributed to prohibitory and protective tariff systems, we may calculate upon improvement in the relations between this country and Austria, as one of the most valuable results from the Exhibition of 1862. Probably, works of art, rather than raw materials, will be what our country will chiefly receive. Amongst the principal exports to all countries, in 1861, from the empire, were glass and metal ware of fine quality: indeed, these largely exceeded in value most of the other articles; and it is also worthy of remark that by far the largest of the imports were cotton-yarns. Graphite is the mineral which is exported in the largest quantity; and the production of it has enormously increased since 1851. Large quantities of whetstones are sent from Galicia into Russia.

The building-trades in Austria we find, are amongst the few for which a license is required; but even foreigners, it appears, may obtain that, or the liberty of the natives as regards ordinary pursuits. The next Industrial Exhibition in Austria should take place in 1865. Great attention is paid to intellectual culture.

Information is given respecting the produce of metals in Austria during the year 1860; whereby it appears that the smelting furnaces, 279 in number, which are chiefly fed with charcoal, used up 20,000,000 cwts. of different iron ores, and gave 6,200,000 cwts. of iron; but that this production being insufficient to provide the refining establishments with their materials, there were imported in the same year, 182,300 cwts. of smelted iron, and 21,800 cwts. of raw castings. Of the refined iron and steel produced, much is exported. The Imperial and Royal Geological Institute contributed to the Exhibition, some valuable maps, and a large collection of specimens of fuel, and printed a separate catalogue of these contributions. Amongst the Austrian marbles exhibited were specimens of those from the recently opened quarries at Adneth, near Salzburg (two and three coloured, or white, red, and blue) which have been used for a fountain, and balusters of a staircase in the New Exchange, Vienna; and for an altar in St. Sepulchre's Church, Jerusalem. The roughly-hewn blocks, up to 150 cubic feet, cost at Salzburg 4 to 7 Austrian *florins* per foot, that is 8s. to 14s. English. The practice of building in Austria varies considerably with the localities, and ranges from the *pisé* work of huts in the eastern parts of the empire, and the woodwork *châlets* of the Alpine regions, to the masonry of the public buildings in Vienna, and brickwork of many of the houses. Hollow bricks, and pipes for drainage, are manufactured in large quantities near Vienna; as are also, ornaments and figures in terra-cotta. Stoves of pottery-ware, one of which in the Exhibition has been noticed by us, also form an important item of manufacture. The roofs in the country are covered with straw, or rushes; in small towns, boards or shingles may be used; whilst in the principal cities, tiles, slate, sheet-iron, or copper are general. In the western provinces, building regulations promote that sort of construction which involves the least danger of fire. A description of roof-covering, described as pasteboard or incombustible felt, has been introduced; but it has not gained much ground. About 500,000 cwts. of hydraulic lime are produced every year in Lower Austria and the Tyrol; but 100,000 cwts. of Portland cement are imported. The carpentry of Vienna has claimed for it, high rank; and, we read, that workmen resort to the Austrian capital from all parts of Germany, with the object of improvement from it.

We shall notice products of some other foreign countries in another article.

OUR PUBLIC STATUES AND MEMORIALS.

THE great decennial Exhibition which we have just closed, comprised, notwithstanding all its mismanagement and shortcomings, such an aggregation of the arts and industries of the whole civilized world, as they existed in the year 1862, as did not fail to attract vast numbers of foreign visitors of all countries to our metropolis. Men of science, literature, and art naturally formed an unusually large proportion of the vast multitude of strangers drawn together on such an exceptional occasion; and we have consequently had to undergo a course of criticisms which, though occasionally severe and often unjust, was yet, in the main, truthful; often exposing shortcomings of various kinds to which our national self-sufficiency induced us to close our eyes. It is well to be occasionally reminded of our national defects, especially through the medium of foreign visitors; who, viewing us from their own stand, which is very different from ours, naturally perceive blemishes (occasionally rather remarkable ones) which we had never looked for, and of which, in our insular self-sufficiency, we had not indeed believed the existence possible.

Nothing so much struck the artistic section of our crowds of foreign visitors during the present season as the extreme poverty of our public memorials and honorary statues. They appeared to our continental critics utterly unworthy of the intellectual and artistic eminence of our nation; and so, in fact, they are; and the foreign critics, however sarcastically unpleasant they may have been in their mode of stating it, were perfectly correct in their general verdict.

Let us ourselves examine a few of our public statues and memorials, from the dingy kings in the dingy out-of-the-way squares, to the caricature of the Great Duke at Hyde-park-corner, the monstrosities of Trafalgar-square, and the clumsy masonry of the monument of Waterloo-place.

We have, as a rule, adopted bronze statuary instead of marble, on account of our variable climate, which proves speedily fatal to the beauty of the fair Carrara product. This necessity ought to have led to a more careful study of statuesque outline; for it is the character and general perfection of the main external lines of a group or figure that can alone impart attractive effect to bronze statuary, which soon changes its naturally deep hue to one of positive black. Characteristic outline is as necessary to a bronze statue, unless gilt, as to a shadow on the wall, as no details within the external line can be made expressively visible, when blackened by a London atmosphere, except in a very favourable light. Yet this necessary feature in bronze statuary has not been successfully studied in any of our principal public statues. Take, for instance, that of Pitt, in Hanover-square. Like many others, its general outline is entirely without meaning; the figure being, after a kind of artistic superstition which prevails amongst us, muffled up in a kind of cloak or toga. It is true that this statue of Pitt, by Sir Francis Chantrey, one of the artist's best works, has a dash of characteristic life about it, in the outstretched arm, and in the fine head, which is thrown back with that defiant air which the orator often assumed in rebutting the attacks of a talented and powerful opposition. But here all effective outline ceases; the rest of the figure being bundled up in a mass of unmeaning cloak, such as assuredly Pitt never wore while addressing the House, nor we should think under any other circumstances. There is, moreover, a little lump of this wrappering gathered together just above the left arm which, at a little distance, is altogether unintelligible. Only the other morning, while taking a round among our public monuments, guided by the official list recently called for in Parliament, we stood before this work, at about the proper focal distance, pondering upon what could be the meaning of the lump of something over the left arm; and it was not till after a much closer and very careful examination of the nature of the excrescence, that its true character as a little bundle of drapery was discoverable. Of the baldness of the pedestal of this production, and of those of many other similar works, we shall have something to say farther on.

The statue of the Duke of Kent, at the upper end of Portland-place, is still more defective than that of Pitt as regards the general treatment of the outline. In the first place the nearly black statue is placed immediately in front of a mass of equally black London shrubbery, against which it is impossible that its outlines, such as they are, should define themselves with clearness of effect. In the second place, the forms of the figure itself are so intermuddled with the inevitable cloaky drapery, and further complicated by a square mass of semi-architectural accessories, that at a short distance the whole becomes an unmeaning and apparently shapeless lump of darkness. The pedestal of this characterless mass of bronze presents no decorative feature to relieve or support it; indeed, it possesses no feature intended to do so, being merely a cubic mass of granite put together by means of very careless masonry, as though its only object was that of serving as a rough sort of tablet for the inscription.

Chantrey's equestrian statue of George IV., in Trafalgar-square, is somewhat better, in point of distinctness of outline, than either of the works just described, inasmuch as the artist has found it impossible to put any sort of cloak or toga upon the horse, the outline of which tells out, in consequence, with proper distinctness. The figure of the king is, however, betoga'd in what was the usual fashion, the whole work being, in fact, a weak imitation of the well-known statue of Marcus Aurelius, which all Italian tourists have seen on the Campidoglio at Rome. The other statues of

this arena are still less satisfactory. Trafalgar-square seems, in short, destined to become, as was lately observed by a contemporary, a sort of out-door "Chamber of Horrors." The statue of Napier vulgarizes, in a very painful manner, the well-remembered aspect of one of the greatest of our modern heroes; and that of Havelock, with its large heavy head, is scarcely less objectionable; while the statue of Nelson, placed almost out of sight on the top of a column (disfigured by a very ugly lightning conductor), justifies the simple remark of the old Chelsea pensioner, who exclaimed, when first taken to see it, "Why, they've mast-headed the admiral."

The masonry of the uglier column, on the top of which stands the statue of the Duke of York, is still more coarse and unsightly than that of the Nelson column. In short, we do not seem to be aware of the kind of thing that a public iconic memorial ought to be. Opposite to this is the memorial to the Guards who fell in the Crimea, in which, though the figures of the Guards, below, are in many respects very excellent, yet the whole fails as a public metropolitan monument, in consequence of the general poverty of the accessories. It has been improved lately, and doubtless the sculptor would willingly have done more. The pedestal is, on two sides, ornamented with bronze shields, bearing the names of Alma, Inkerman, and Sebastopol. These shields are enriched with exceedingly well-designed branches of oak; but they are both precisely alike — both cast in the same mould. It is in this way that we have invariably failed in all our recent monuments of this class. Our artists or our committees do not appear to possess that feeling for rich monumental compositions which so remarkably distinguishes their brother sculptors and architects of the Continent. In this monument one might imagine that the bronze figure on the top, and the finely modelled group of Guardsmen, had been placed where they are in a temporary manner, on a few rude blocks of granite, just roughly prepared, in order to raise them to a proper height for exhibition, while a fitting architectural framework and supports, highly enriched with decorative sculptures of a suitable character, were being prepared for their more permanent location.

In a public memorial of the statue form it is not merely necessary to obtain the statue and place it on a lump of stone of sufficient height: it is, above all things, important that the statue should be presented to the public in a dignified manner, with such appropriate surroundings and enrichments as are calculated to add sufficient richness and artistic importance to the work as a whole. Costly and varied materials, abundance of appropriate ornament, and elaborate minuteness of detail, combined with an imposing grandeur of general outline and character, should accompany a statue or general monument intended to perpetuate the memory of those who have deserved well of their country. These should be well-conceived and artistically-wrought emblems within delicately-covered borderings and mouldings; and in important monuments there should also be additional figures secondary to the principal ones, but wrought with equal care and beauty. Such are the legitimate resources of the designer of a grand public memorial.

The simple figure of the prince, or hero, or civic worthy, is not capable of much artistic decoration; and indeed, in such subjects, simplicity of treatment is generally the most successful, in so far as the figure by itself is concerned. But then it is not a single figure, not a mere family portrait, that we are speaking of: it is a public memorial—a monument which is intended to be an ornament to the metropolis as well as a honour to departed worth; and, therefore, the simple portrait figure is not enough. The simply utilitarian view is not applicable to public monuments. The artistic Greeks, who well understood the theory of decorative and monumental art, did not allow a purely iconic statue to be set up, except in very rare cases, that of Miltiades being one of the very few exceptions. They considered that the positive features of any individual man could not possess that general ideal beauty which public monuments should possess, and which they sought, not only in the elegance of accessories, but in the idealization of the chief figure itself. The portrait of Alexander the Great, for instance, appears on his coins idealized as Hercules, his head picturesquely hooded with the skin of the Nemean lion. In the magnificent modern monument, St. Peter's, at Rome, the sepulchral images of the popes of the fifteenth, sixteenth, and seventeenth centuries are but comparatively small features in the gorgeous compositions of which they form the nucleus; and in most of the exquisite sepulchral monuments of the sixteenth century, especially those which enrich the churches of Italy, France, and Spain, the iconic statue of the deceased, though the central object of the composition, is yet but a very small portion of its varied adjuncts and details, or of its general magnificence.

In our own days monuments have arisen in Paris and other continental cities which vie with those of the fifteenth and sixteenth centuries in their display of that true understanding of decorative monumental art without which neither grandeur nor beauty can be made to adorn public works of that class. One might cite the Berlin monument to Frederick the Great, of which a charming model was lately to be seen in the International Exhibition; or the magnificent millenic memorial just erected in Russia, composed of a whole crowd of statuary and countless details of extraordinary richness; but modern Parisian monuments may serve our purpose better as an example of what such works ought to be.

It is now several years since the monument to Molière was erected in Paris, on the site of the house in which he was born, in the Rue de Richelieu. The figure of the great dramatic poet forms, of course, the central object of the composition; but scarcely less important features are the "Tragedy" and "Comedy," by Pradier; and these again, are framed, as it were, in rich surroundings of differently-tinted marbles, heightened in their effect by decorative sculpture and carved borderings, introduced with the most lavish profusion. The whole composition, including delicately-sculptured emblems and other ornamental features, is of large and imposing character, forming, as a whole, an artistic object which at once arrests the attention of the spectator, and seems a worthy tribute of the art and genius of the present to the art and genius of the past,—a worthy monument to the author of "Le Misanthrope," "Le Tartuffe," and "Le Bourgeois Gentilhomme." Why have we not such a monument to Shakspeare? It is not that we cannot afford it, or that we have no artists to execute such a work. It is that in matters of art in a public form there is a niggard feeling among us that affords our artists few opportunities of practising monumental decoration on so brilliant a scale as on the Continent. Our House of Commons is more narrowly parsimonious in voting money for the protection of the fine arts than for any other item in the whole length of the annual budget. It was not always so. In times not very far distant, and in which we have been taught to believe the arts languished for want of protection, much more liberal patronage seems to have been extended to artists in general, and more especially do the fitting enrichments of public monuments seem to have been far better understood and far more willingly paid for. In some very interesting archæological gossip recently published in the *Builder*, we find no less a personage than Grinling Gibbons himself employed to decorate the pedestal of the statue of Charles II. at Windsor. The importance and beauty of the ornaments may be judged of from the charge, which, considering the general value of artistic work at that period, appears enormous. The memorandum in the royal account, dated from October, 1678, to September, 1680, contains, among other charges by Gibbons, the following: — "Carving and cutting the 4 white marble panels of y^e^ pedestal of his Maj^s^ statue on horse-back, £400." If such artists in decorative sculpture were now employed on our public monuments, and paid after this fashion, we should soon see them more fitly enriched with the right sort of work. Purely ornamental sculpture was equally cared for in the reign of William III. We find from the researches of the same zealous antiquary that Caius Gabriel Cibber, the well-known decorative sculptor, was constantly employed on carvings of a purely ornamental character at Hampton Court, for which he was most liberally paid. Here is one of his bills: — "To Caius Gabriel Cibber, carver, for a great *vauze* of white marble enricht with divers ornaments, with a pedestal of stone, also *enricht*, £234. More for a great marble urne, with divers base-relieves and figures, £521. 12s.—in both, £755. 12s." If we now appreciated ornamental sculpture in this spirit, and if the decorative surroundings of our public statues were paid for at the present day after this fashion, we should soon, as we have said, have national memorials springing up in various parts of our metropolis which would not fear comparison with the most celebrated foreign works of this class. But there has been an artistic misconception concerning the true character of public memorials in this country. The statue itself, even if of inferior character, has been deemed the one thing necessary, whilst, on the contrary, it is in the manner of presenting that statue to the public eye that the true character of a public monument should consist, and this has often been said before in the *Builder*. When an eminent living person is about to be received on some marked occasion by the authorities, and the general public of a great city, he is not requested to walk in, on foot, unattended, and with nothing to distinguish his entry on that occasion from the entrance of an ordinary man in the routine of daily business: the very reverse is practised. Arches of greenery, enriched scrolls, emblems, and other decorations meeting him at every step, the houses are festooned with flowers, and groups of lovely children, as symbols of purity and joy, arrayed in festal dress, greet him with the joyous cheers of their young voices. It is so that our living worthies are presented to the public, and it is so that their marble representatives, after death, should be presented, in the more permanent forms of bronze or marble. The statue is there, not to be put upon a blank and solitary pedestal, but to be surrounded with signs of respect and gratitude, in that permanent form which art, when properly directed, can so fittingly bestow. The pleasant arches of living greenery that welcomed the living should be transformed to marble wreaths to honour the dead. The festoons of flowers should also be there, not in their perishable form, but in some long-enduring material; and the smiling children, too, in gilded bronze, in rare stone, in perennial granite, or in the purity of whitest marble, may be there too. It is the manner in which the statue is honoured, not the mere presence of the statue itself that gives grace, value, and beauty to the memorial. Instead of this, the appendages of our public statues are always niggardly, and often confined to a mere inscription, which is not unfrequently very carelessly executed. The plain granite stage-work of the Guards' Memorial in Waterloo-place is clumsily built up of separate blocks, put together in a way that shows every staring joint, with its wretched mortar, in a very offensive manner; while in a work of such importance the common processes of construction ought, above all things, to be entirely concealed. All should seem the work of the artist: not a single trace of the mechanical labour should appear: not a joint but should have sought refuge under some ornamental moulding, or against some inlaid slab of rare material, or beneath some highly-wrought symbol or trophy. A Grinling Gibbons—and we have plenty of them—should have furnished his "4 white marble panels for y^e^ pedestal," and have further enriched it, as he did the twenty-eight seats and stalls at Windsor, which, according to his bill, he "carved with fruit, flowers, palms, laurels, and pelicans;" and there should have been a Caius Gabriel Cibber to embellish the angles, at different elevations, with "great *vauzes* of white marble enricht with divers ornaments," and with "great marble urnes with divers bas-reliefs and figures." We have plenty of Caius Gabriel Cibbers ready for the work; but we live in an age when sculptors are found who are fully convinced that they do not require the assistance of the decorative carver, and architects who care nothing for the aid of the sculptor and painter. We have abundance of artistic genius in every class, but the team does not run well together. The different branches of art require combination. The sculptor, the decorative carver, the architect, the painter, do not yet fully appreciate how entirely a monument of the highest class depends upon the well-balanced and harmonious union of all their various arts, blended by a common feeling into one harmonious whole.

We have been induced to make these remarks in the hope of convincing our designers of public monuments that the placing of a memorial statue on a badly-built heap of gray granite is not the proper way of presenting the statue of a departed Worthy to the eyes of posterity. We may be told in reply, of recent statues placed in fine Gothic niches, but a mere framing of conventional Gothic can seldom form a very appropriate kind of decoration to a memorial statue erected in the present day; and on a future occasion we may have something more to say on the subject of Mediæval monuments to modern heroes.

H. N. H.

"THE MEANS OF FLYING."—Mons. De Groof, of Bruges, asserts that after eleven years' study he has invented the means of flying in the air in any direction, and only needs money to demonstrate it beyond question. The machine is small, he says, and will enable man to move in the air "with the swiftness of the swallow and the vigour of the eagle." He asks for aid from England.

MISMANAGEMENT OF PUBLIC WORKS IN INDIA.

In my former letters I endeavoured to point out to your readers the present state of the Public Works Department of the Madras Presidency, and I believe I somewhere stated that many of the military officers admitted that their works were defective; but alleged in excuse that "they were unable to do better." I once spoke to a subordinate officer of the Public Works Department (a sergeant in the sappers); and, while admitting the justice of the very severe censure he was casting upon some of his superior officers for their ignorance, I repeated the well-known excuse. "But, sir," rejoined my indignant respondent, "we *can* do better, if they would but allow us." A more striking proof of the truth of this assertion cannot possibly be furnished than is afforded by a comparison between the Railways and the Public Works Department. It is admitted upon all hands that the Indian Railway Companies were not always happy in the selection of their engineering assistants: instead of appointing tried and experienced men, well-known assistants of Stephenson, Macneill, Brunel, Rennie, or other eminent engineers, and of which class many could, doubtless, be found in England, the railway engineers were, for the most part, young men of but very limited experience, and of no local knowledge: most of them were entirely ignorant of the language and habits of the people, quite new to the climate and the productions of the country. Still, let any unprejudiced observer, with the slightest amount of practical knowledge, compare the works of the Madras Railway—more than 400 miles long—with the wretched jobs of the Public Works officers; and yet these men had to depend upon the same native workmen, to use the very same kind of materials, to contend against the same climatic influences; and their bridges, their stations, their bungalows, and their workshops, are as much superior to those of the military officers as a palace is superior to a hovel. Near Madras, where the work was commenced first, the difference is not so perceptible, as there you will see the best specimens of the public works, and the worst of the railway; but the terminus of the railway is a magnificent building, well designed, and well executed; but only go along the entire line to Beypoor, and examine the bridges, the viaducts, and the other works, and you will soon see numerous specimens of good masonry, good brickwork, and good carpentry. I have noticed on the line cut granite and cut laterite work quite equal to English; well-built houses; roofs that defy any monsoon, and bridges that refuse to be swept away by the high fresh, which is always a ready excuse for bad foundations. Why, if our English builders could see the foundations of many of our road bridges, they would wonder that they stood any fresh at all. Often, when travelling on the railway, have I been gratified by witnessing at the various road stations the ready adaptation of native materials to the requirements of modern life: but no such adaptation is to be met with in the public works. All is done after the native fashion, as all the officers work under the direction of native foremen; and though they are nominally masters, yet they are really servants of the native maistrys, who, on their part, are quite content to appear in the humble position of assistants, when in reality they do as they like.*

In thus instituting a comparison between the railways and the public works, I am influenced by no interested motive. I do not know one single railway engineer in all India, and I have not one share in any railway company. I believe they are susceptible of considerable improvement in many ways, one of which I consider would be the more general employment of experienced English engineers, as it is well known that many of the railway engineers have not given satisfaction to their employers: but, with all their defects, their works completely put to shame the military engineers of the Madras Presidency; and several of their viaducts, stations, and other large works, are highly creditable.

In one of my former letters I mentioned the fact of the Home Government having sent out from England a small body of civil engineers to infuse new life into the department. What has become of those gentlemen who went to Bombay or Bengal? I have not been able to learn; but in Madras, up to the present time—now nearly eight years,—not one large public work has ever been intrusted to their care. They have all been compelled to serve under the military authorities, and those only who have most readily abandoned their European habits and adopted Indian ideas have been deemed worthy of promotion;* while the older and more experienced, who have laboured hard to introduce any kind of improvement, have been systematically kept down, and every exertion has been used to render the good intentions of the Home Government nugatory; and after this, they have been taunted in the public journals in the interest of the military with having been "weighed in the balance and found wanting." I should like to know in what professional pursuit, save the practice of arms, the military engineers have not been found wanting;—certainly not in civil engineering, architecture, or practical building, as in all these they are more and more wanting every year. Almost all they can do is to jabber a few native sentences and fill up official forms, and even these very imperfectly; but this is looked upon by Government as quite sufficient to qualify them for any appointment in the Public Works Department.

About three or four years ago the Home Government sent out to Madras a very large stock of European tools and machinery of all descriptions, comprising steam-engines, fixed and portable steam dredges and pumps, lathes, drilling, planeing, and boring machines; cranes, crabs, brick and tile-making machines, &c.: all these were from the very best English makers, such as Whitworth, Nasmyth, Muir, Clayton, Collyer, &c. The number of these articles must have amounted to some hundreds, and their cost must have been thousands, if not millions of pounds. They likewise engaged, upon very liberal terms, a number of mechanical engineers, to erect and work the machinery, and teach the natives, &c., their proper use; but I believe up to the present time there does not exist in the whole Madras presidency one permanent and suitable Government workshop except the gun-carriage manufactory and the Madras Mint. Nearly the whole of the valuable machinery is lying scattered about over different parts of the country, broken, damaged, rusty, and useless; most of the mechanical engineers either kept in idleness or employed as foremen of native carpenters, in making furniture, office fittings, &c. Some of these men, but just arrived from England, were compelled to work in the open air at midday with the thermometer at 140 degrees, and the consequence, as might be expected, was, that three or four of them died of heat and exposure, and the others were disgusted with the treatment they met with, and left or got discharged. I believe there are very few of them in the service now, and not one has yet been allowed the proper means of instructing the native youths; and then the military officers reported that these men were a failure, and accused them of intemperance or insubordination as an excuse for their dismissal; and thus the good intentions of the Home Government were entirely defeated, and things allowed to go on in their old way.

The workshop at Dowlaiswarum, on the Godavery, about which so much has been said and written, has been established upwards of fifteen years, and it is merely a large field on the river bank, with a rude lot of wooden sheds, roofed with thatch or Palmyra leaves, beneath which a large collection of the valuable machinery sent out from England is rotting and useless; while the native carpenters, smiths, &c., are doing their work much after the same fashion as they used to do before the commencement of the Godavery Anicut; indeed, in my experience of India, I have seldom met with a place where the inhabitants appeared more rude, barbarous, and ignorant, than at Dowlaiswarum, and yet this place is the head quarters of the Madras sappers and miners, and the centre of the operations of the great Godavery Anicut.

It is a singular fact, and one which certainly requires explanation, that wherever you meet with the head quarters of an engineering staff, the roads, buildings, &c, are in a far worse state than elsewhere; and if you ever meet with a clever native mechanic, he has always been educated by some doctor or some collector or civil judge, but hardly ever by an engineer officer. Why this class of gentlemen should be more opposed to improvement than others I leave my readers to guess: the fact itself is undeniable. Perhaps it arises from early education, and the general conservative character of all military bodies.

It is certainly much to be regretted that the Home Government has not thought proper to institute strict inquiry into the success or failure of their praiseworthy efforts to enlighten the natives of their Indian territories. I believe an examination of the way in which their civil and mechanical engineers, their machinery, steam-engines, &c., have been treated out in India would elicit some valuable and instructive lessons for future improvement.

I have now completed my task of calling public attention to the state of our works in the Madras Presidency; and I can only regret that it has not fallen to the lot of an abler pen than mine. The subject is full of interest, and deeply concerns the people of England as well as the millions of India; and it is with no captious or prejudiced spirit that I have thus endeavoured to expose the failings and defects of the military engineers; many of whom, I believe, as I have before stated, would gladly avail themselves of superior knowledge, if the etiquette of military rule did not teach them to consider it highly derogatory to learn from those who, unlike themselves, are not entitled to wear a red coat and a sword. As, however, India is now becoming better known to the people of England, let us hope that the time is not far distant when even the Indian Government will find it to their interest to pay the highest salaries to the most efficient and experienced men;* and above all, to pay their public servants for the proper use of their brains, and not to reduce them to mere machines, as they do now.

Indian.

* It has been asserted by many well-informed persons that the entire Central Office of Public Works is in the hands of a few Brahmins and East Indians; and certainly some curious disclosures, about two years ago, seemed very much to favour the opinion.

* One gentleman was put into an independent position by Sir C. Trevelyan; but, after his recall, the engineer was speedily returned to his former subordinate post.

* A young lieutenant, as superintendent of police, gets Rs.700 per month, with extra allowances. An experienced European engineer, Rs.500 per month, with a deduction of Rs.20 per month for income-tax.

THE LIGHTING OF THEATRES.

Readers of the newspapers have probably seen, that recently on the occasion of a rehearsal of "La Muette de Portici," at the Paris Opera-house, an accident befel Mdlle. Emma Livry, the dancer. Her dress caught fire, and she was seriously injured. The *Athenæum*, whose "Musical and Dramatic Gossip" is generally interesting, stated, in noticing the occurrence, that Mdlle. Livry's "dress took fire at the footlights," (her part being that of *Fenella*), and observed that "there should be surely something devised to avert this peril." As, in one of our numbers of last year, we had described, from careful inspection at the Opera-house in Paris, an arrangement of the *rampe* or "float," which, realizing other objects of importance, was intended to prevent possibility of such disasters as our contemporary refers to, we were anxious to ascertain whether the arrangement had been abandoned; and if so, what could be the reasons for disuse of the contrivance which had appeared to us deserving to be introduced in the London theatres. We had also, just previously to the date of the accident, in the first of two articles descriptive of recently built theatres in Paris, referred a second time to the arrangement, whilst hesitating to say that it had been adopted in these latter cases. Indeed, as to these theatres, assertions have reached us that there is an appearance of smoke and flame from the foot-lights. We are now, through the courtesy of Mr. Martin, a member of our profession, and secretary to the administration of the opera, in possession of full particulars of the occurrence, and of the existing arrangements; which particulars will be found to attest a position of the question of stage-lighting, as satisfactory as we originally looked forward to. Mr. Martin, in answer to inquiries, writes:— "Our new float [*rampe d'avant scène*] has worked admirably since the month of June, 1861; and every day its advantages are better comprehended and more appreciated. It realizes perfectly all the ameliorations that we had in view, and of which the principal one is that of rendering impossible the catching fire of the dresses of the dancers." He says that it was not by the lights of the *rampe* that the accident happened. The facts were these:—Mario was rehearsing the part of *Masaniello*; the second act of the opera had just commenced; and Mdlle. Livry, who had not to appear before the end of the act, was at the side of the stage. Anxious to hear Mario, who was about to make a *début* in a part which he had not previously filled in Paris, she climbed some portion of the stage-machinery close to where the lights of the wing are placed. Her dress, which was unusually full, and very inflammable, touched one of the jets of gas; she was enveloped with flame in an instant; and notwithstanding prompt help, was much burned. She has only within the last few days, been reported

out of danger. "All that," continues Mr. Martin, "as you observe, is foreign to the *rampe;* and if the system of that contrivance could be applied to the lighting of the wings, which it probably will be in the new building, it would afford perfect security." Messrs. Melon & Lecoq, who manage the lighting, have, Mr. Martin intimates, so perfected all details that we may look for a performance, shortly, of a promise which they made the writer, to send drawings; and if they are desirous of advantage from publicity in this country, we would urge them to let us have such materials for the publication, and so prevent the introduction into the London theatres, of less satisfactory contrivances, in place of those which we should be glad to see them engaged in introducing.

The features of the arrangement in the Paris Opera-house, it may be well to repeat, are, the complete encasement of the row of flames of gas in a long tube or chamber, which towards the stage, or *scène*, is formed of ground glass for transmission of the light, and on the other side has some contrivance for reflection;—secondly, the ventilation of the chamber by pipes carried from its ends, up the sides of the proscenium; and, thirdly, a possibly less obstruction to the view,—the height, at least, of the whole contrivance above the floor of the stage, being less than that of the old-fashioned "float"-lights and reflectors, and smoke not being seen by the spectators in the pit, rising between them and the actors.

We may add to our recently published information concerning the new theatres of Paris, that one of those of the Place du Châtelet, which had been called Théâtre Historique, has finally acquired the name "Théâtre Impérial du Châtelet, (Ancien Cirque)"; also that there is now a "Théâtre du Boulevard du Temple," being we believe the old "Théâtre Historique," or "Lyrique"; and that two, if not three, entirely new homes for dramatic companies, are to be erected near the hither end of the Boulevard du Prince Eugène, in compensation to the inhabitants of the quarter, for the six theatres destroyed, and rebuilt on distant sites.

CHURCH OF ALL SAINTS, KINGSTANLEY, STROUD.

THE new church of All Saints, Kingstanley, was consecrated on the 30th of November. The building consists of a nave with a north aisle of two bays; a tower at the north-west, forming the principal entrance and serving as a porch; a chancel ending in a five-sided apse, with vestry and organ-chamber on the north. The local stone is used with Bisley Common weather stone for the parts most exposed. The general style adopted is Early Decorated. The tower is finished with a lofty gable covered with lead. A massive buttress, placed to take the thrust of the chancel arch, marks the division of the church into nave and chancel, which otherwise is not very conspicuous externally, the chancel being of the same width as the nave, and the walls of the same height. The principal features of the interior of the building are the two arches between the nave and the aisle, supported on a low red granite column, and the sharply pointed chancel arch, also supported by granite columns of higher proportions.

The effect of the interior is much enhanced by the fact of all the windows being glazed with painted glass. It was the wish of the architect that the glazing should be of a really consistent design throughout; and that it should not, as is too often the case, be left to chance whether there should be any arrangement at all. The glazing consists of panels of picture glass, with figures on a ground of ornamental quarries so disposed as to form a band of colour all round the church; a method much used in the early part of the fourteenth century; at which period stained glass, with so many of the decorative arts, reached its highest and purest development. An illustration of this method is seen in the valuable glass still remaining in Merton College Chapel. The glass, which is the work of Messrs. Morris, Marshall, & Co., is noticeable for the interest given to the subject by the designers, and is well spoken of with reference to the arrangement of the colouring.

The fittings of the interior comprise open benches in the nave and aisles, and stall-wise seats in the chancel. These, with the communion-table, lectern, organ case, and doors, are all of oak. The font is of Grey Forest stone. The capitals of the chancel arch and of that in the nave are carved. There is a sculptured cornice round the five sides of the apse. The contract was for about 1,900*l.*, exclusive of the painted glass, organ, font, carving, hangings, &c. The architect was Mr. G. F. Bodley, of London.

MIDDLE ROW STOPS THE WAY.

WE regret greatly to learn that the Committee of the Metropolitan Board of Works, to whom the memorial, praying for the removal of the north side of Middle-row, Holborn, was referred, decline to recommend the Board to undertake the execution of the improvement at present. It is extraordinary for what a length of time we put up with what are acknowledged inconveniences, and in some instances may be styled public nuisances.

It is with difficulty, notwithstanding the throng of traffic which often blocks the chief thoroughfares, that we can get old streets widened, or fresh roadways, which are absolutely necessary, made. It is often the labour of years to induce the authorities to see rightly; and then there frequently occur Parliamentary and other stoppages, which cause still longer delay before a single workman begins to execute matters which ninety-nine persons out of each hundred have long felt to be necessary. We might refer to many instances, such as the slow process of widening Cheapside, Fetter-lane, Chancery-lane (the last-named place, according to the present rate of progress may probably be completed in about a couple of centuries); but we would just now speak more particularly of such blocks of buildings as that already referred to, which materially interfere with the traffic of our chief roadways. There is one in the Strand, which forms the south side of Holywell-street. A glance at the position of this property, and the throng of vehicles in that part of the Strand, will show how great an improvement would be caused by the removal of these somewhat picturesque but dilapidated houses.

It may be that the houses here will be wanted for the proposed new Courts of Justice; but when the matters in connection with that business will be settled no one at the present time can say. Meanwhile the throng of carriages and foot-passengers continues to increase, and the evils of this obstruction and of Temple-bar become greater.

As regards Temple-bar, the last except some fragments of the gates of London city, it is impossible, although influenced by a strong antiquarian predilection, to witness the scenes of confusion which are here daily presented without feeling the necessity for its immediate removal: we say this remembering that it is in its way a representative relic of past times, and is also the design, though a bad one, of a famous architect. It is not necessary to destroy the gate; but the same changes, the same necessities which have led to the demolition of the other gates and towers, render the shifting of Temple-bar to some entrance to our parks or other quiet spot, where it might be made for centuries to come an object of both interest and utility, a "consummation devoutly to be wished."

The block of houses shown in the engraving, which forms Middle-row, and stretches from the bottom of Gray's-inn-lane to near Southampton-buildings westward, impedes the traffic of one of our most important thoroughfares, rendering the width of the road adjoining useless. From the bottom of Gray's-inn-lane eastward, if we except the somewhat steep descent, Holborn-hill is a wide, convenient, and spacious street; but just at a point where the regular traffic of Holborn is largely added to by that which flows by Gray's-inn-lane from a considerable part of the northern district of the metropolis, these antiquated and not very sightly houses stand in the roadway, leaving on one side a narrow foot-path only, and on the other an insufficient space of foot-path and a roadway which is totally unfitted for the large number of carriages which pass that way.

It is evident that the removal of this block would prevent much trouble and confusion, and materially improve the means of traffic between east and west. Attention has been often directed to this point; but, as has been the case in other instances, nothing is to be done "at present." The cost of this removal would be considerable, of course; but, when we take into consideration the importance of our great central thoroughfares to the whole of the metropolis, this should not stand in the way. The sum, amongst such a large population, would not be materially felt.

THE FLAXMAN DRAWINGS.

AT the Graphic Society, on Wednesday evening, there was an admirable display of paintings and drawings, including a clever picture by Israels, and a set of very curious and in some respects remarkable drawings by Japanese artists. The chief attractions of the evening, however, were the drawings by Flaxman, which have been purchased for the Flaxman room, and have been arranged by Mr. Atkinson, with the assistance of Mr. Foley, R.A. A very clever polygonal stand has been contrived for them by the former gentleman. Walking round it, each side presents a certain number of drawings framed, and these frames revolve, and show other drawings at the back. Beyond this, however, every other side is found to be part of a triangular framework; the other two sides of which have also frames of drawings; and this triangle, revolving, brings, of course, six frames of drawings in rotation to the front. Moreover, as the light is on one side of the room only, the whole stand revolves on a circular pillar; and thus 381 drawings are admirably exhibited, and may be each examined under the most favourable circumstances. Every lover of art should visit the London University, which has become the shrine of the works of one of the greatest artists that England has yet produced.

CHRISTMAS TIME IN 1862.

CHRISTMAS, with all its pleasant and mirthful associations, its friendly relations and general charity, is close at hand, and multitudes of English people are anxious that the poor throughout the land should have the means of celebrating this important festival. We have no doubt that especial care will be taken respecting this throughout Lancashire, by the large number of persons of various classes who are in their several localities working earnestly, and using their best endeavours to relieve the distress in that district.

We have, however, a fear that the very proper and intense interest which is at present centred in the North may cause a want of the usual attention which is so necessary, particularly if the winter is severe, for the relief of a vast multitude in this metropolis. In the midst of the nearly three millions of this population there are to be found an extent and intensity of poverty which can only be understood by those who have carefully investigated the various conditions of this enormous city.

In many of the church districts of London there are very excellent preparations made to supply comforts to the poor at Christmas. In the All Saints' district, Islington, and in many others, there are coal clubs, established under the superintendence of the clergymen, to which persons may pay 4d. a month (1d. a week); and for this, a few days before Christmas, three sacks, containing six cwts. of good coals, are delivered. There are also clothing and bedding clubs, from which, in proportion to any weekly payment, persons may obtain, at a very small cost, flannel petticoats and other useful articles of dress, blankets, quilts, &c. In connexion with these clubs, there is a necessity,

in order to encourage provident habits amongst the poor, to assist the sums deposited by voluntary subscriptions. In Clerkenwell, there is a society of inhabitants, who meet at stated intervals, and make a subscription. This, when the hard winter weather sets in, is expended in the purchase of coals, &c., which are distributed amongst the deserving poor of the neighbourhood. This good example might be followed elsewhere.

The soup-kitchens, too, particularly in some of the poorest parts, such as Bethnal-green, Spitalfields, St. Luke's, &c., depend, to a considerable extent, on the aid of the benevolent. Nor should it be forgotten that the very existence of several of the London hospitals, ragged schools, and many other valuable institutions, depends upon the usual amount of public support. Attention should also be given to the poor-boxes of the metropolitan police-courts; for few except those who are actually concerned know the large amount of real distress which is relieved by means of this fund.

It has been suggested that the London charities might be made usefully to co-operate with those of Lancashire, and that the girls in the sewing schools might be kept at work with some profit if persons in London who require clothing, and for charitable distribution, were to send the materials to Lancashire to be made up. No doubt this arrangement would do good; and in other ways the Lancashire schools might be supplied with work, without materially interfering with that of the regular London needlewomen. In the sewing schools of the north it will be some time before the girls will be generally able to execute the finer descriptions of needlework. Large numbers are employed in knitting worsted and lambs'-wool stockings. These hand-wrought stockings are very warm for winter wear, and are more durable than those woven by machine. We do not know what is the difference in the price: we doubt not if these goods were sent to the London and other markets, and marked as being hand-made in Lancashire, they would meet with a large and ready sale.

We have been urged to make these brief remarks in the hope that, while every care is taken to lessen the distress in the manufacturing districts, the distressed poor in the metropolis may not be overlooked.

GREENERY AND FLOWERS IN THE LONDON SHADOWS.

AN exhibition, of much interest, has been held in the "Lamb and Flag Ragged School;" an institution which is doing a large amount of good in Lamb-court, Clerkenwell, and surrounding neighbourhood. This consisted chiefly of autumn flowers, which had been reared by the boy and girl scholars, in their homes in the dingy courts and alleys; and so satisfactory, on the whole, has been this experiment, that it is worth while to mention the manner in which it was managed.

At the proper season, 142 roots which had been sent by friends of the school, were planted in flower-pots, boxes, baskets, &c., and given to the same number of children and poor people of the neighbourhood. All these were named and numbered; and at the time appointed for the show as many as 100 were brought to the school for exhibition: the remainder had probably died for want of proper management. It must be confessed that the plants were not, upon the whole, favourable specimens of vegetation: the leaves were bleached and few, and the stalks long and straggling: the flowers were also small, and not very blooming; but, notwithstanding, no one could look upon these plants, reared under such circumstances, and with such difficulties to contend with, and not feel pleasure at the belief that the attempt in this instance made has had a humanizing effect on both children and parents.

The prizes were divided amongst five classes of competitors; the first class comprising the children of the school only, for chrysanthemums, pompones, and ferns, or other plants grown under glass. The prizes were small, but it is hoped that next year means will be forthcoming to increase them. In this class the prizes ranged from 1s. to 3s. In the second class, the poor of the district, the prizes ranged from to 2s. to 5s. The third was to either of the two previous classes, or competitors, living out of the district, for a collection of three best plants of chrysanthemums, pompones, and plants grown in baskets, the prizes ranging from 2s. to 6s. The fourth was to the same parties, for collections of cut flowers, showing the greatest variety and best arrangement; and the fifth, for girls of the school only, for a bouquet, vase, or basket of flowers, showing the greatest taste in arrangement, the prizes being 2s. 6d., 1s. 6d., and 1s. There were also three extra prizes, open to all, for plants of any description, of 5s., 3s., and 2s. The prizes were awarded by Mr. Broome, of the Temple Gardens, and Mr. Gordon.

The interest of the exhibition was much aided by plants and flowers, both growing and cut, which were sent by gentlemen from Islington and other districts. Amongst the most curious objects were six bunches of large black grapes, grown without heat in Clerkenwell, by Mr. Joseph Brooks. The heaviest and finest bunch was taken from a vine a century old, formerly growing in a garden in Rosoman-street; which, says the *Clerkenwell News*, was probably a cutting from one of the old vineyards which formerly abounded in this neighbourhood. The flower-show was visited by large numbers.

THE RECENT FIRE NEAR GRAY'S INN LANE.

FEW of the large fires which have lately happened in the metropolis have been so extensively and rapidly destructive as that which has occurred in Portpool-lane; and an examination of the ruins shows the great danger which there is in keeping such immense stores of combustible materials in the centre of a dense population as are often found.

Nothing could be more complete than the destruction which in a very short time took place over a large area. On the west side of the area of the fire are the "Thanksgiving" Model Lodging Houses; on the north, Reid & Co.'s immense brewery: on the south are closely-packed ranges of poor dwellings, every room of which is thickly inhabited: on the east there are houses of a similar class. Fortunately, on all sides except that on which the model houses stand, there was a considerable extent of walls without openings exposed to the raging of the fire.

The Portpool-lane model buildings are fireproof. The rooms are arched with brickwork; the stairs and railings of slate, stone, and iron: the window-frames were of wood, but these the firemen cut away with their axes. The roof has been partly burnt; and if this building had been constructed on the usual plan, there is little doubt but that it would have been destroyed, for the flames rushed in at the windows and swept along the ceilings of the rooms. The inmates have been put to inconvenience, but their furniture has not been injured by the fire. In other directions the poor people have suffered; and what is much to be lamented, thirty-six joiners have lost their tools, which, we are told, on the average, were worth about 30*l.* to each man. In this way, 1,080*l.* have been lost; and the calamity will deprive most of these men of the means of providing for their families; for we hear that few had thought of insuring the property on which themselves, wives, and children so materially depended.

Let us take advantage of this accident to show the great importance of insurance to men who require the use of valuable tools, and remind them that the price of four or five pots of ale would be sufficient to insure them, during a year, from loss by fire. There are many thousands of workmen of this class in the metropolis alone; and it would be worth the while of some insurance offices to advertise their willingness to undertake business of this description.

TYNDAL'S BUILDINGS, GRAY'S INN LANE.

WE are glad to hear more favourable accounts of this place. Our readers have from time to time been informed of the large cost of the conversion of the houses in this court from poisonous dens to wholesome tenements. After this was done a difficulty arose in getting the place occupied by a proper description of tenants,—persons who should be somewhat orderly in their habits, and could also be depended upon for the payment of their rent. This, we fear, will continue to be an obstacle in connexion with dwellings of this kind. Nothing could be worse than the population of this place before the alterations.

Those who were able to appreciate the advantages of good ventilation, a sufficient water supply, &c., were afraid to come here to live. Hence many of the apartments have remained unlet; and from time to time it was found necessary to get rid of persons who would neither be quiet themselves nor allow other persons to remain at peace.

Not long ago as many as twenty-five of the apartments were empty. Now, however, the number unlet has been reduced to fifteen; and we have no doubt that, if the advantages of this place were better known among working men, the vacancies would be soon filled. We are told that a passage will be opened under the arch, both to the school and to the new church; the tower of which latter rises over the houses at the bottom of the court. This opening will be an advantage; and ought to make the court more desirable to persons who, having young children, require as healthy a home as can be found in the pent-up town at a cheap rate.

A room has been set apart for the use of one of the City missionaries, who here holds evening meetings. There is also a small library, with opportunities for little savings; and here the general health is excellent, although many of the people are poor.

As regards the success of such establishments, much depends on the person who is appointed to the management.

THE LATE RAMSAY RICHARD REINAGLE.

THE daily papers announce the death, on the 17th ult., at Chelsea, of Ramsay Richard Reinagle, painter, once R.A. (and esquire). Mr. Reinagle was in his eighty-seventh year. His death awakens many associations. His father was Philip Reinagle, a painter, and Royal Academician. Philip was assistant to Allan Ramsay the painter, and as useful in his way to Allan as Northcote was in many ways to Sir Joshua Reynolds. The father (forgotten as a painter at the Manchester Art-Treasures Exhibition, and at the recent Exhibition at Kensington), painted greyhounds, pointers, and water-spaniels, dead birds, humming-birds, parrots, and macaws, and was, with Stubbs and others, the forerunner in art of Sir Edwin Landseer.

Mr. Reinagle got his Christian name of Ramsay from his father's master and friend, Allan Ramsay, the painter. Allan was the son of the author of "The Gentle Shepherd." The name awakens many associations. "Godfather" Ramsay, called by Reynolds "the most sensible among all the painters of his time," died in 1784,—Allan's father, "whose verses," says Campbell, "have passed into proverbs,"—in 1757. Ramsay Reinagle (so recently taken from among us) could talk, when he pleased, well and interestingly about Ramsay the painter, and Ramsay the poet,—carrying us back not "sixty years' since" only, but to a century and a half, when Anne was queen, and the House of Hanover were entertaining very slender hopes of acceding to the thrones of those kingdoms "'t'other side" the German Ocean.

Mr. Reinagle's expulsion from the ranks of the Royal Academy of Arts in London, and his title to append the letters "R.A." to his name (those much-coveted letters of many a clever young man never destined to obtain them), will be in the remembrance of many. He exhibited at the Academy a work with his own name to it that was not by his own hand. His rank entitled him to be hung well, and well he was hung. The real painter made good his claim to its composition: the thirty-nine, in full conclave, found him guilty of fathering a work not his own, and expelled him their body. The world of art and law and right confirmed the sentence.

The Royal Academy is very near its first centenary; and in that long period, with many difficult natures to contend with, it has only had recourse to two expulsions;—Barry, in the last century, when Sir Joshua Reynolds was president; Reinagle in this, when Sir Martin Archer Shee was president; and in the same period (nearly a ninety-nine years of tenure) it has had one resignation, and that a real loss to the body. The late George Clint (our second Zoffany), wearied with hope long deferred, threw up his title of A.R.A.; no longer deigning to allow his thirty-nine supposed superiors to degrade him,—not in his own eyes, but in the eyes of the public,—by the continued slight they had thrown upon talents of rare and undoubted excellence.

QUANTITY SURVEYORS AND CONTRACTORS.

WITH reference to an observation under the head "Taking out Quantities," in our last,* referring to the terms in which a firm of surveyors wrote to a number of builders, asking them to state their intention of tendering for the proposed Lunatic Asylum, and to nominate the firm in question to take out the quantities, a London firm

* P. 882.

request us to inform them if they were the parties in question; by whom the complaint was made; and so on; and they forward a copy of a letter sent by them to certain contractors, asking them, if they proposed giving a tender for a certain lunatic asylum, to signify their intention to the architect, Mr. So-and-so, at No. So-and-so, and to nominate the writers as surveyors to prepare the quantities.

Our observation gave no clue whatever to individuals, and we have no intention of making it a personal matter now. Suffice it that the copy of letter sent to contractors by our present correspondents has just the misleading tendency to which the complainants pointed;—leading them, in fact, to suppose it was written in conjunction with the architect, which was not the case. We are quite willing to suppose it was unintentional.

The inquirers say, in conclusion, "We take the liberty of putting you on your guard against being made the medium of a vindictive personal attack on any member or members of the profession." We advise them to reserve their *caution*, and to use it in their own future proceedings with contractors. If we were in the habit of allowing ourselves to be made the "medium of vindictive personal attacks," some members of the profession would have a less easy time of it than they now have, and would probably feel more grateful to a journal conducted in that respect as the *Builder* has been than they now sometimes show themselves to be.*

SCULPTORS AND THE ART-UNION OF LONDON.

AT a special meeting of the council of the Art-Union of London, held on Tuesday last; Professor Westmacott, R.A., in the chair; it was resolved, on the motion of Mr. Godwin, to offer a premium of 600*l.* for the best statue or group in marble, under conditions to be advertised. The competition, in plaster models, will be open to artists of all countries. A year will be given for the preparation of the models, and a year afterwards for the completion in marble of the selected work. Mr. Hayward, Mr. Lewis Pocock, Mr. Antrobus, Mr. H. Baker, Dr. Dickson, Mr. Butterworth, Mr. W. Herbert, Mr. Soden, and others took part in the proceedings.

COMPETITIONS.

Leicester.—Messrs. Hodges & Sons, of Leicester, have recently had a limited competition among the Leicester architects for a new warehouse. The design of Mr. Shenton, the architect for their previous works, was selected. Designs were likewise sent by Messrs. Smith, Jackson, Mellican, Ordish, Drake, and Worthington. The selected design is a composition of brick and stone, and surmounted with a stone cornice and balustrade. The circular corner, in which is the entrance, forms the principal feature in the design, and is surmounted with a block balustrade, forming a plinth for two reclining figures. The cost will be probably about 5,000*l.* Architects who compete for private matters of this sort, unless every competitor be paid, are aiding to damage their profession.

Surrey County Hospital.—The committee of the proposed Surrey County Hospital have selected the design with the motto "Hoc Age: B," by Mr. Lower, as the best. The premium of ten guineas has been awarded to Mr. Colson, of Winchester, for his design, "Spes;" and the premium of five guineas to Mr. J. Douglas Mathews, of London, for his plan, "Utility." The author of the design "Integrita" is being asked for. We have received several letters objecting. One writer signing himself "Victim," says,—"Of course a Guildford architect has been chosen;—one who it seems sent in three sets of drawings; the 'set' selected consists of one sheet only; and has neither elevations nor sections. It is, moreover, drawn to a $\frac{1}{16}$th scale; the 'instructions' requiring an $\frac{1}{8}$th scale, and specially mentioning elevations, sections, specification, and methods of warming and ventilating, all of which are here left to the imagination. As most of the designs sent in have been prepared with great care, and are fully illustrated with proper drawings and details, the departure from the instructions is the more observable. It seems a pity to give so many architects such an amount of unnecessary trouble and expense when rules are thus to be broken: much better to have asked for sketches only, or have given it in the first instance to the chosen one. Again, professional assistance was to have been obtained; but I cannot learn that such has been the case, the matter being virtually decided by two or three local doctors." We may have something to say next week.

Masonic Hall, Derby.—We understand that Messrs. Wilson and Dutton Walker are the successful competitors, and that the style of the selected design is Moresque.

* We are asked to mention, and do so willingly, that our previous remark does not apply to the surveyors who have been appointed by the contractors to take out the quantities for the Carmarthen Lunatic Asylum.

GAS.

THE apparatus by which the "atmospheric gas," as it has been called, is produced, is said to be very simple. A carburator saturates atmospheric air (which may be forced through it by any means, provided a regular supply be kept up) with an inflammable vapour, and the same result probably would ensue whether benzine, naphtha, or any similar liquid were used. The apparatus consists of two chambers, the upper containing the principal body of liquid, and the lower a small quantity to saturate the air with. The liquid in the lower chamber is kept at a uniform height by a tube and valve, or other means. The lower chamber is completely filled with wicks, which are kept saturated by capillary attraction. The air passes through these wicks, and not through the liquid, and licks up so much of the inflammable vapour as to become capable of ignition.——Mr. S. E. Turner, of Birkenhead, has provisionally specified an invention which relates to an apparatus for burning a mixture of inflammable gas and air, in present use, wherein the inflammable gas escapes from a jet placed inside a cylinder open at the bottom, and covered at the top with a diaphragm of wire gauze, or finely-perforated plate, so that atmospheric air enters the bottom of the cylinder, and, mixing with the inflammable gas issuing from the jet, assists the combustion of the same, which takes place on the top of the perforated diaphragm. To render the combustion in such an apparatus more perfect, Mr. Turner introduces one or more metal tubes into the bottom cylinder wherein the mixture of the gas and air takes place: such tubes are open at the bottom, and pass up through the gauze into the combustion chamber. By this means the atmospheric air is used in a highly-heated state, and the combustion, adds the specification, is much more nearly perfect.——Several landlords in Paris have recently assumed a right to prohibit their tenants from using gas, not only in the upstairs rooms, but even in the shops on the ground-floor. The Court of Cassation has just decided that the custom of lighting by gas having become almost universal, every landlord must be taken to have consented to its use in the absence of any express stipulation to the contrary.

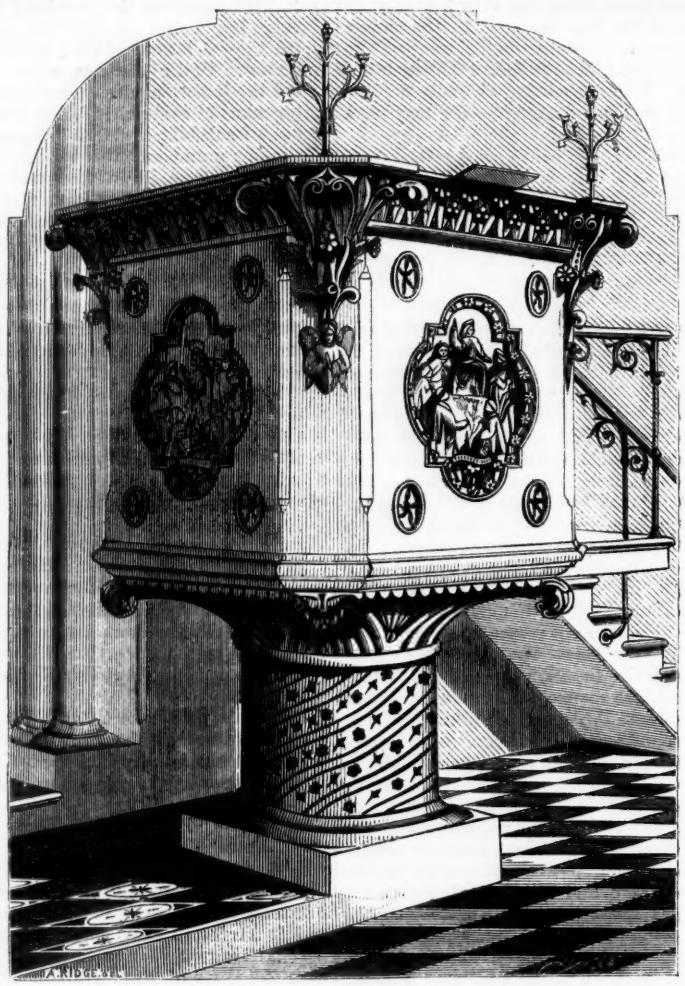
STREET NOMENCLATURE.

THE names of localities present many interesting features for the consideration of the antiquary, the historian, and the philologist; and even the most careless passer cannot fail to be frequently struck (according to his temperament) by the grotesqueness, the inaptitude, the antiquity, the improvement, or fallen fortune of the various streets of London, through which he makes his way. But to a thoughtful mind how suggestive are the names he sees around him, and how many memories are associated with places and designations which appear of the most trivial or common-place description, or only excite remark from their singularity, or the apparent perversity of taste that dictated them. The subject is an extremely attractive one, but I wish at present to confine my remarks to a single portion of it only; which, although not so interesting in a general sense, is yet of considerable importance, and is well worthy of attention. I allude to the names given to new streets, and alterations in the names of existing streets.

Until the passing of the Metropolis Local Management Act, owners of property were allowed to give what names they pleased to streets, or portions of streets, erected by them; and the result has been the confusion and bad taste so painfully evident in London, but more particularly in the suburbs. A man built three houses in a thoroughfare, which he named after himself, or his wife or daughter, and numbered them separately: somebody else built three or four more houses, and did the same thing; and so on, until in a long street there were, perhaps, some twenty separate titles as Maria-terraces, Paradise-rows, Putlogo places, &c, rendered still more perplexing by being subdivided into divisions styled upper, lower, middle, north, south, east, and west. Under the Act which I have mentioned the inconvenience caused by this system, or rather want of system, is being remedied by the names of subsidiary places being abolished, and the road renumbered throughout, the odd numbers being on one side of the road and the even numbers on the other. This very sensible reform is carried out by the Metropolitan Board of Works on requisition from the vestry in which the road is situate, and has been effected with a very proper regard for the convenience of the majority; and the Board has only exercised its powers when a good cause has been shown for its interference. No fixed plan, however, appears to be pursued with regard to the selection of the names of the roads that have been thus operated upon; the name being generally chosen by the vestry; and, in the event of there being no other street of the same name in the postal district, it has been approved by the Board. This seems hardly as it should be. Vestries are certainly not the best judges in these matters, and seem much more interested in studying the euphony of the appellations they choose than their propriety or distinctiveness, or the evident advantage of preserving as much as possible the old names of places; not to speak of the desirability of doing so from an antiquarian point of view. As an instance, the Clerkenwell vestry propose to re-name Bagnigge Wells-road and Coppice-row, and call the whole of the road from King's-cross to Victoria-street Farringdon-road; alleging, as a reason for discarding the old name; the numerous mistakes that are made in writing it, as well as its length. Bagnigge Wells-road is not of very great antiquity, not dating back much more than a hundred years; nor is there any historical interest attaching to it, although it is asserted, on very doubtful authority, that Nell Gwynne lived in a house adjoining the Bagnigge Wells Tavern; but there is a smack of antiquity about the name, and it serves to recal the time when spas and "wells" were favourite fashionable resorts, and even Royalty and Beau Nash honoured the now unfashionable northern suburb with their illustrious presence. There is really no reason for the change of name, nor any connexion between Nicolas de Farndone, who gave his name to the Ward of Farringdon, of which he was the first alderman, and Bagnigge Wells-road; and the only argument is, that one sounds better than the other. This is a most objectionable course; and if pursued would lead to very mischievous results, as any one may see by noticing the unmeaning long-winded names that have been substituted by builders in the suburbs in place of the homely, pleasantly-associated designations of our youth. What an agreeable souvenir of Puritan times remained in Gospel Oak Fields; and how easily the memory might have been preserved, even when built upon; but, instead, the usual hackneyed titles are employed, and the Gospel Oak will be soon forgotten, except by the very few.

Another example of the want of some regular plan with regard to the names of streets occurs in the parish of Islington, where the Metropolitan Board, at the request of the freeholder, approved of Berner's-road as the name of a thoroughfare that had been enlarged adjoining the new Agricultural Hall. There was no reason for renaming the road; it being merely a short prolongation of a street that had been built some time; and no propriety in the name selected, the manor of Berners, or, as it is now called, Barnsbury, being at a considerable distance. The vestry took offence at the name having been changed without consulting them, and applied to the Metropolitan Board, through their representative, to rescind the resolution authorising the alteration: this, however, the Board refused to do, and so the matter remains as it is; and while one end of the roadway is called Parkfield-street, the other end, which is considerably narrower, is called Berner's-road.

I would suggest that in naming streets some system should be adopted analogous to that pursued in Paris; that city perhaps coming nearer to our requirements in matters postal and municipal than any other. There an attempt is made to make the names of streets indicative of their position. Thus, we find the Rue Cuvier and Rue Buffon on each side of the Jardin des Plantes: near the Orleans Railway are the Rue Watt, Rue Jouffroy, Rue Papin, Rue Fulton; and radiating from the Place de l'Odeon, and near the theatre, are the Rue Crebillon, Rue Voltaire, Rue Racine, Rue Molière, Rue Corneille: thus the position of these streets is readily borne in mind, and the names of illustrious men are perpetuated in the most fitting manner on the very scene of their



UNITY CHURCH, ISLINGTON: PULPIT.

triumphs. Then the street where any celebrated persons, and more particularly men of letters, have lived is frequently, after their death, called after their name. This practice is open to some objection, and I am not sure I would advocate its adoption with us; but it shows a sense of fitness and delicacy of feeling to which we seem strangers. I do not see why the names of eminent people should not be applied to our streets more frequently, instead of the unmeaning abstractions in which we indulge; and feel sure that use would soon reconcile us to the innovation. The Rue Jean Jacques Rousseau is not, perhaps, a very poetical appellation; and yet it never strikes a Frenchman as incongruous or ugly.

With regard to numbering, the practice of putting the odd numbers on one side and the even on the other must cause considerable inconvenience, particularly to letter-carriers, who must either re-sort their letters or else cross the road continually; and in a long road you have just the same chance as formerly of having to traverse the whole of it in search of some particular number unless you know at which end the numbers commence; and there does not appear to be any rule for this. In most continental towns the numbers all run in the same direction; in Paris, if I remember, from north to south in those streets at right angles to the river, and from east to west in those which are parallel to it. In many cities the course of the river is indicated in reference to the streets, which is a great assistance to a stranger. The plan of having a communal number to every house, as well as the number in the street, would, I fear, be impracticable in London; and it has, I believe, in Berlin become necessary to require the number of the house and street to be specified in addressing letters to go by the post. In some cities, as at Venice, the employment of differently coloured numbers is of great service. John Hebb.

Water-colour Painters' Lancashire Relief Fund.—Two hundred and thirty artists have now signified their intention of contributing pictures. Sir Charles Eastlake, P.R.A., and some other gentlemen out of the Society, have consented to act on the committee. The difficulty at present seems to be to find a room to exhibit the works. Letters may be addressed to Mr. Fahey, at 5, Waterloo-place.

UNITY CHURCH, UPPER STREET, ISLINGTON.

This new building, erected for worship by Unitarians, stands on the east side of Upper-street, in a line with the Police-office and Vestry Hall, both recently erected. The plan comprises nave and side aisles, with transepts, communion, and organ recesses, with porch and tower entrances, and staircase formed in a turret, leading to a gallery intended for school children at the western end. The total length is 81 feet from east to west; width across nave and aisles, 47 feet; and in transepts, 61 feet. The height from floor to ridge of roof is 44 feet; and to the top of finial on spire, 120 feet.

The nave is divided into four bays, and is separated from the aisles by cast-iron columns with ornamental leaf caps. Springing from the caps of these columns transversely are the curved and pierced brackets under the hammer-beams of the roof; and in the length of the church the curved brackets as before support the longitudinal girders taking the roof timbers. The roof timbers are stained slightly, and varnished.

The communion recess is divided from the nave by a deeply-moulded arch, carried by coupled columns, carved; the recess being paved with Maw's encaustic tiles, and the walls being lined with the same to a height of about 9 feet, formed into panels with slabs of Bath stone, surmounted by a capping of the same material. All the panels are illuminated with a selection of texts. The communion recess is parted from the body of the church by ornamental iron standards, painted and gilt, supporting an oak moulded rail.

The pulpit, of which we give a sketch, is of Bath stone, inlaid with coloured marbles and cements, and was carved by Mr. William Pearce; who also executed the carving to the exterior and interior of the building throughout.

The passages are laid in black and red tiling diagonally, with slate bordering; and a raised platform formed on the line of pulpit is laid with Maw's encaustic tiling.

The exterior, shown by the accompanying engraving, is executed in Kentish rag with Bath stone dressings throughout, the doorways being enriched with polished Aberdeen granite shafts. The roof is banded with grey and purple slating, being felted beneath; and the exterior is broken by dormers for ventilation.

The seats and divisions are of slightly-stained deal, varnished, with cut ornamental heads to the bench ends. Hot-water apparatus is used for heating, executed by Messrs. D. & E. Bailey, the pipes being laid in channels through the passages, covered by perforated gratings. The lighting by gas has been the work of Messrs. Peard & Jackson, and consists of coronals of lights suspended from the hammer-beams of the roof, with chandeliers in the transepts.

The church contains five large and three small stained-glass windows, the work of Messrs. Heaton, Butler, & Bayne, and subscribed for by several of the congregation. The general contractors for the work were Messrs. Axford & Co., of Coleman-street; the decorations being executed by Messrs. Simpson & Co., under the direction of Mr. Thomas Chatfield Clarke, of Leadenhall-street, architect; and the cost of the church, exclusive of the ground, schools at back, stained glass, organ, &c., approximates to 5,500*l*.

METROPOLITAN TOLLS.

Among the notices of private Bills to be introduced in the ensuing session is one by the Metropolitan Roads Commissioners north of the Thames, in which they propose to remove various gates in Middlesex; including, we believe, the City-road gate, and those bars which now exist at Islington, Hackney, Camden-town, Kilburn, Haverstock-hill, Harrow-road, Notting-hill, Kensington, and Walham-green. For some years the commissioners have been putting back the metropolitan gates into the country, until this course is no longer possible without calling on the parishes to assume their proper liability and repair the roads.

VERBUM SAPIENTIÆ.

While here in Lancashire abides the stress
Of wintry season and of sharp distress,
A story I would tell—an ancient fable—
With such unvarnish'd skill as I am able.

A dervise came to Bagdad when the crown
Sat on the mighty forehead of Haroun,—
A prince whose sway was feared by every khan,
From ancient Nile to distant Khorassan;
In whom the people own'd so firm a trust
That he was named Al Raschid, or The Just;
And who so held his court that, in a word,
None came or went but might be daily heard.

The dervise prostrate bow'd, then raised his head,
And to the monarch spake, and thus he said:—
"O Caliph, in the Prophet's name, to whom,
Across the Syrian desert, have I come,
From mournful groves of palm, where Tadmor lies,
Distraught by women's wail and children's cries;
They and the chiefs who once were first in war,
Struck down by famine and an hunger'd are;
Their stores consumed of corn, and wine, and oil,
Their flocks a prey to murrain, and a spoil.
Whence shall this people in their need be fed,
If not by thee, O king?" The dervise said,—
"To thee they cry, ere yet their strength be spent,
In this great vengeance which the Lord hath sent.
Allah's decree is just, though it be sore;
We crave thine aid till Allah's wrath be o'er."

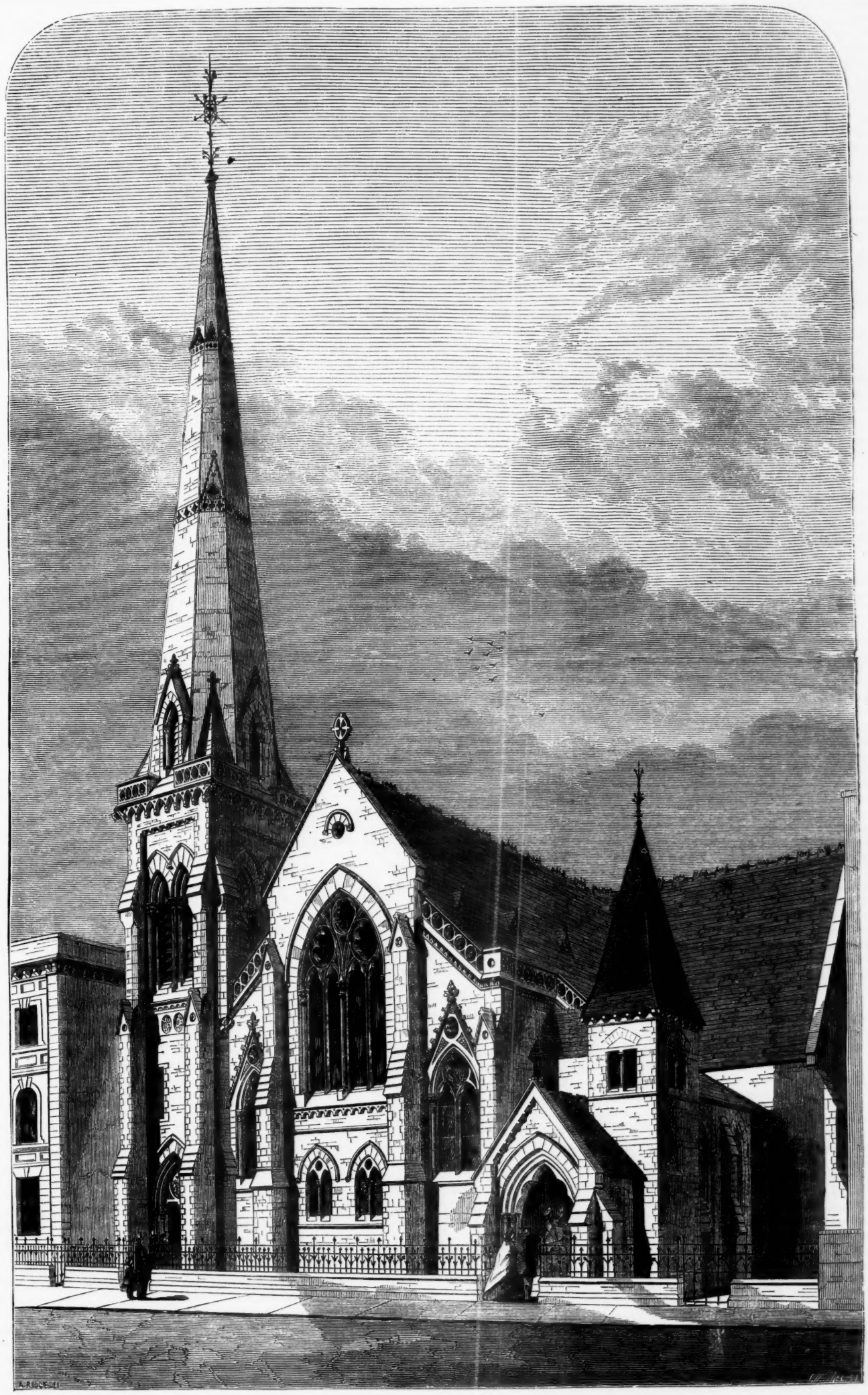
The caliph mused. "How say'st thou, then," he said:
"Does Allah justly pour on Tadmor's head
His heavenly wrath?" "Yea, so," was the reply.
"Then," quoth the caliph, "to what end should I
Transgress the fiat of the Will Most High?
Whatever ill befall, it is most fit
To reach some good transcendant: so 'tis writ."

The dervise answer'd,—"Far as thy renown
Hath stretch'd o'er land and sea, most sage Haroun,
For learning taught in schools of Magian lore,
But little hast thou conned the sacred store:
Know, then, it consorts with divine decree
That men should learn divinest charity!
Should feel that holier life is understood
Alone in deeds of gracious brotherhood.
Feed, then, the hungry, that thou may'st perceive
How nobler far to give than to receive;
And so thy mind shall rend the veil, and see
The secret purpose of hard Fate's decree."

Then, turning to Giafar, his good vizier,
Than whom ne'er Eastern king possess'd the peer,—
"Go," said the caliph, "send the hungry food;
'Tis Allah's will that we should all do good."

Moral: If any doubt how good should come from bad,
Forget you not the Caliph of Bagdad.

James Hibbert.



UNITY CHURCH, UPPER STREET, ISLINGTON.——MR. THOMAS CHATFIELD CLARKE, ARCHITECT.

GOTHIC WORKS IN THE NINETEENTH CENTURY.

It seems every architect carries his point in this age of styles and pointed periods. Every church has its spire. Spire and tower, tower and spire, competition or private,—every man aims at the point, and on some occasions forgets the principal points which are included in the lines below:—

"It were a pious work, I hear you say,
To prop the fallen ruin and to stay
The work of desolation. It may be
That ye say right; but oh! work tenderly:
Beware lest one worn feature ye efface—
Seek not to add one touch of modern grace:
Handle with reverence each crumbling stone:
Respect the very lichens o'er it grown;
And bid each monument to stand,
Supported e'en as with a filial hand.
'Mid all the light a happier day has brought,
We work not yet as our forefathers wrought!"

STEEPLE BOB.

VALUE OF TECHNICAL EDUCATION.

INSTITUTION OF CIVIL ENGINEERS.

In the course of a recent discussion upon Mr. Crawford's paper on "The Railway System of Germany," it was observed that, so far back as the year 1848, the German governments had taken to the belief that a special education for engineers of all classes—mechanical and civil—was one of the first duties of a government. At that time there were regular colleges for the training of skilled workmen and for the education of civil engineers in most of the great cities of Germany. By these means a set of thoroughly-educated young men was prepared, ready to acquire practical knowledge, and to turn it to account, in a very short period of time. One result of this system had been that, whereas English locomotive engines were at first copied implicitly, the German engineers gradually took to making the designs for themselves, and to depart more and more from the established patterns, so that now, on most of the principal lines, the engines were made exclusively in Germany, in some cases at a less cost than in this country; and it was said that a Berlin firm had recently tendered successfully for locomotive engines required in England.

In regard to management and economy of working, it was maintained that the public convenience was less consulted on German railways than on English lines: there were fewer trains: the speed was very much slower; and the stations were further apart. The rate of fares in Germany had not been stated; but it was believed that, for the transport of goods and minerals, the charges were higher. These were elements why larger dividends were realized on comparatively smaller capitals.

To this it was replied that, in Westphalia, the centre of German industry, as many trains ran as on some English lines, and the speed of the express trains was 40 miles an hour.

With respect to the construction of German railways, it was believed that the earliest lines in Germany were offshoots from the Schools of Mines in that country; and though they had no doubt taken the first ideas of railways from their great projector, George Stephenson, yet they had been carried out by themselves; and that the earliest example of an iron lattice bridge was that across the Elbe, at Magdeburg, the wooden lattice having been previously adopted in America.

The growing prominence of Germany in the industrial arts was attributed mainly to the system of technical education, particularly of engineers, which prevailed there; and it was argued that the distance between the English and German engineers was an increasing one in favour of the latter, as was deemed to be evidenced by the superior character of the continental machinery in the Industrial Exhibition.

One of the reasons why German railways had been executed so cheaply was attributed to the population supplying an excellent industrious class, and to the works not being pushed forward so hurriedly, by which the price of labour was artificially raised. Throughout Prussia the cost of the earthworks did not exceed from 8d. to 9d. per cubic yard; the German navvy only receiving 1s. 6d. per day. Very little plant was employed: the barrow-runs were longer; and the embankments were chiefly executed in that way, instead of by tipping from waggons from a great height, which might account for their assumed superiority.

In conclusion it was assumed that, without venturing to depreciate that which was a valuable adjunct to practical men of all classes, yet undue importance must not be attached to mere technical education, in contradistinction to that practical knowledge which it was essential the engineer should bring to bear in the exercise of his profession. The history of engineering showed that the works which reflected the highest honour on this country had been carried out by men who had not received a special education, but who, being possessed of great natural genius, were enabled to take advantage of the national resources and peculiarities in such a way as to bring the profession to the high pitch it had already attained, and to command for English engineers universal respect.

CHANGES IN IRON.

At a recent meeting of the Manchester Literary and Philosophical Society, Mr. Dyer, vice-president, exhibited a broken screw bolt, 1¼ inch square (used to fasten a cart-body to the axle). The fracture, near the head end, appeared very much like one of cast iron: imbedded in the centre of the bar was a smooth egg-shaped mass about ½ inch diameter, crossing the fracture, and leaving a cavity as its mould in the metal on one side. He assumed that faults like this were probably owing to the rapid processes in use for reducing masses from the puddle into bars of wrought iron, whilst the metal was only partially converted to the malleable state, as appeared in this sample of bad iron. The iron, in a semi-fluid state, is passed from the furnace through a succession of rollers, without re-heating or faggoting, as was formerly practised, and at once reduced to the sizes required. The improved rolling-mills could not, it seemed, insure improved qualities of wrought iron, whilst they afforded temptations to make it far inferior to any that could have been made fifty years ago. Considering the many hazards to which life and property are exposed in travelling by railway and otherwise, from the iron "shuffled off in haste," and found in use in engineering constructions; it becomes important that previous tests should be employed to ascertain the real nature of the iron, so as to leave no question of its being in a safe condition for the purpose intended, and not like this specimen, and like much now-a-days made by pressing the half-converted puddle into marketable shapes.

In connexion with the subject of the slow changes which iron undergoes, M. Breguet, of Paris, stated that in their furnace for preparing soft iron, he had observed a remarkable case of crystallisation of wrought iron. One of the furnace bars became brittle: and, on breaking a portion of it, he found it to contain a large cubical crystal of iron, each of whose sides measured five millimètres in length.

ARCHITECTURE OF EDINBURGH.

On the 28th ult. Professor Blackie delivered a lecture on the subject of "Architecture" (in the school-room below St. John's Free Church), under the auspices of the Young Men's Association in connection with that congregation. We learn from the *Edinburgh News* that the concluding part consisted of a description of the architecture of Edinburgh, in the course of which Professor Blackie said that although St. John's Episcopal Chapel (at the west end of Princes-street) was perfection in the inside, it had externally one grievous defect. The body was either too large or too small—he could not distinctly recollect which—for its wings; but so far as his memory served him, he thought the wings too small, and seemed afraid to show forth their own existence. With regard to St. Andrew's Church in George-street, the lower part of it was like a large round tub, and the upper part like a little man perched on the top. The steeple was, in fact, like a fairy riding on the back of a hippopotamus. The steeple, no doubt, was excellent in itself, although they could not compare it with that of the Assembly Hall, the finest piece of architecture of its kind in Edinburgh or anywhere else, but was out of all proportion to the rest of the building. People seemed to have got tired of the Greek style of architecture; and they endeavoured to improve it by placing small belfries or turrets on the large solid mass below, giving them the appearance of a schoolboy's bonnet on the back of an elephant. It was a most miserable attempt to keep to the Classical style when they had recourse to such jim-crack ornaments, resembling bride-cakes, and rather disfiguring than otherwise the general appearance of the building. The new Club in Princes-street, the front of the Commercial Bank, and the Clydesdale Bank, were specimens of architecture both chaste and elegant. Professor Blackie concluded by expressing his desire to see more attention paid to the internal decoration of our Presbyterian places of worship. He ridiculed the idea that our churches could be injured by such decoration. He did not hesitate to say that many of those who had gone over to Episcopacy—who had, in fact, apostatized from the good old faith, perhaps, from the want of finely-painted windows and pictures—would have remained if they had been gratified in this extremely fine age with a little æsthetical delectation during the service, or even before or after the minister came in. It was great nonsense to say that such decorations were associated with Popery. For his own part he held that by having recourse to a little decoration we could lose none of our religion. He would not be afraid to follow the Episcopalians so long as they followed nature, for the laws of nature are the will of God, and the will of God is the duty of man.

CHIMING CHURCH BELLS.

With reference to his former communications (see pp. 609 and 683), Mr. Walesby says that, in order to show in a tabular form how his method of chiming bells for church service on Sundays "*indicates certain intervals of time, and agreeably relieves the ear*," the morning performance commencing at half-past ten, may be thus stated:—

10·30 to 10·35, first, second, and third bells.
10·35 to 10·40, third, fourth, and fifth bells.
10·40 to 10·45, pause.
10·45 to 10·55, full peal of bells.
10·55 to 11, treble bell, or the tenor if preferred.

In his former arrangement (p. 609) he suggested that the first three bells should be chimed for ten minutes. Some, however, may prefer the above method.

The peal of bells belonging to the parish of Clyst St. George has been inaugurated by the ringers from St. Mary Redcliff, and St. Stephen's, Bristol. The bells at St. George's have been put into capital order by the rector (the Rev. H. T. Ellacombe), who spares no pains in beautifying and improving the sacred edifice, and everything connected with it; and the peal is rendered perfect by the new treble (F). This handsome bell has been subscribed for by the parishioners and fixed in the belfry as a memorial to the late Prince Consort. This "Albert Bell" is said to be remarkable for clearness and brilliancy of tone. It is from the foundry of Messrs. Warner, of London. One of the peals given on the occasion of the inauguration was the two six-score, composed by Steadman in 1650, and named after him. The following is the order:—1 2 3 4 5 6—2 1 3 5 4—2 3 1 4 5. Slow six.—3 2 4 1 5—2 3 4 5 1—2 4 3 1 5—4 2 3 5 1—4 3 2 1 5—3 4 2 5 1. Quick time.—4 3 5 2 1—4 5 3 1 2—5 4 3 2 1—5 3 4 1 2—3 5 4 2 1—3 4 5 1 2. Continue the slow and quick six, as opposite, until the 58th change, when a single will be made thus—1 3 2 4 5—1 2 3 5 4. Then start from 1 2 3 5 4, as from rounds, and the course end, or 120 changes, will be 1 2 3 4 5 6, with a single—1 3 2 4 5—1 2 3 4 5. There is no scientific change-ringing in Devon. The art is not known.

THE VOLUNTARY EXAMINATION FOR ARCHITECTS.

Preparations are still in progress for holding the first examination in the last week of January next. As part of the arrangements for securing impartial results, the candidates deliver their applications by December 27th inst., four weeks before the first day of examination; and the examiners and moderators are to be appointed by the Institute in general meeting at the first such meeting in January, namely, on the 12th of that month. By these means the candidates, in delivering their applications, are placing themselves in the hands of judges not then appointed. On the first occasion, however, we understand the friends of the scheme have taken into consideration the important question, who should be proposed to the Institute for examiners and moderators?—in other words, what names ought to be offered as a guarantee of the often-expressed desire to start in such a manner as to afford every encouragement to the young men who are to take the somewhat delicate position of first in the field. The examiners, it need scarcely be explained, have to set the questions and appreciate the value in marks of the answers. The moderators, on the other hand, are two gentlemen who have to take charge of the candidates during their hours of trial. In one sense the examiners are in the interest of

judgment, the moderators in that of mercy. The various subjects which these gentlemen have to deal with are, of course, numerous,—drawing and design, mathematics and physics, construction and materials, professional practice, the history and literature of architecture, and (in an architectural sense) languages. The "Regulations" provide for three or more examiners; and the names of certain gentlemen have reached us as likely to be proposed as possessing by the union of their respective acquirements all that is required. The matter must take its own course. The present council has done its best to destroy confidence.

LIVERPOOL ARCHITECTURAL SOCIETY.

Mr. Weightman presided at the meeting of this society, held on Wednesday evening, the 3rd.

Mr. Boult called attention to the use of kamptulicon on wooden floors, and said he found it prevented the escape of moisture, and thus caused rot.

Mr. J. A. Picton corroborated this statement.

Mr. David Walker, architect, produced a design for improving the approaches to the landing-stages. In explanation of the design, he said that Water-street was made the principal approach,—a high-level bridge, 80 feet wide, spanning the present road,—and with an easy gradient fall to the level of the dock quay. The stage bridge was also 80 feet wide, and was carried landward, so as to obtain an easy inclination, in order that carriages could at all times drive on the stage in safety. It was arranged that an evening should be set apart for the discussion of the plan; and Mr. Lyster, the dock engineer, be invited to attend and bring his own plan.

Mr. T. Kilpin then read a paper entitled, "Changes in the Style of Ecclesiastical Architecture."

DALE CHURCH, NEAR DERBY.

We are glad to find that our observations on the discreditable condition of Dale Church, and the want of proper ministration, have created considerable excitement in the neighbourhood; and it may be hoped that, those concerned having been made to think on the subject, some good will result. One well-meaning correspondent writes to say the churchwarden is furious, and threatens proceedings, but begs we will "not be at all alarmed, as the facts are understated." He may rest quite satisfied: we are not in the least "alarmed," and are not likely to be so. An official man in Nottingham writes, "The description in the *Builder* is correct. I frequently visit Dale church: the condition of it deserves the censure contained in your article." A leading man in Derby expresses himself to the same effect more strongly still.

CHURCH-BUILDING NEWS.

Bedford.—The "Catholic Apostolic" portion of the inhabitants of Bedford have lately been building a new church of brick, with open timber roof rough from the saw. The whole is simple and inexpensive, but still picturesque. The architect is Mr. George Truefitt, of London; the builder, Mr. Maxey, of Bedford. It will be opened in a week or two.

Blunham (*Beds*).—The church of Blunham has been reopened, the restoration of the interior having been completed. There has been a reparation of such portions as were decayed, and a removal of the pews which disfigured the interior; and for which uniform sittings have been substituted throughout the nave and aisles. The seats are of oak. The plastered ceiling has been removed, and roof exposed. The chancel now has its proportions displayed, and it has been supplied with some oak stalls. The floor is laid with encaustic tiles. The works were carried out according to the designs of Messrs. Rattee & Kett, of Cambridge.

Whitmore Reans (*Wolverhampton*).—A new Wesleyan chapel has been opened here. The memorial stone was laid in July last, and the chapel will accommodate about 260 persons. The cost, including vestry, school-rooms, outbuildings, boundary-walls, and palisading, will be about 400*l*. The front elevation is of Doric design, with pilasters and entablature worked in bricks of various colours, the caps and bases only of the pilasters being of stone. The entrance is by means of a porch extending over almost two-thirds of the front. The pews and benches are terminated with scroll ends: the former have low doors, and the whole of the woodwork inside is stained and varnished. The design was furnished by Mr. C. Manton, of Wolverhampton, architect, under whose direction the works were carried out by Mr. D. Evans, builder.

Clifton (*Bristol*).—The Hensman Memorial Church at Clifton is about to be consecrated. The cost of the edifice will be about 3,000*l*. or 4,000*l*. A balance of about 400*l*. will have to be provided or guaranteed before the church can be consecrated. The church has been erected as a memorial of the completion of the fiftieth year of ministration of the Rev. John Hensman, incumbent of Clifton.

Munslow Aston (*Ludlow*).—A new Wesleyan Chapel has been opened here. Messrs. Price, of Ironbridge, completed the work. The style of architecture is Gothic, from plans prepared by Mr. Pugh, of Hungerford. It is built of native stone, with Grinshill facings; and the interior is fitted with seats of stained wood, varnished, and has two glass candelabra in the centre. The windows are of stained glass, and the chapel is heated by hot-air pipes.

Egremont (*Cheshire*):—The foundation-stone of a new United Presbyterian Church has been laid at the corner of King-street and Trafalgar-road, Egremont. The plans were prepared by Messrs. J. & W. Hay, of Liverpool, architects. Mr. Nelson is the builder. The edifice is designed to accommodate, in the meantime, 700 persons; but there is space allowed in the plans for side-galleries, capable of accommodating 200 more. The structure is Grecian in style. The estimated cost is 2,997*l*. 15s.

Manchester.—A new Wesleyan chapel has been opened in Dickenson-road, Rusholme. The style of the building is Gothic, and it has been erected to replace a smaller structure which was built many years ago. The chapel was erected by Mr. Joseph Robinson, jun., Hyde, from plans of Messrs. Hayley & Son. The cost, including the land, which is free from chief rent, is over 4,000*l*. In the body of the building there are sittings for 526 persons: there are 100 sittings in the gallery at the western end; and another 100 can be accommodated in the transept.

Edinburgh.—A free church, according to plans prepared by Messrs. Peddie & Kinnear, architects, Edinburgh, is nearly completed for the Pilrig Free Church congregation. The site is at the junction of the west side of Leith-walk, and north side of Pilrig-street; and, from the ground available being extremely limited, the church, says the *Scotsman*, is unfortunately protruded too far both into Leith-walk and Pilrig-street. It is of French Gothic style, built with clean-cut, square-dressed and snecked rubble-stone, and polished dressings. On the side of the church fronting Leith-walk is an entrance, over which are hawthorn leaves and flowers, and above a gablet and finial. On each side of the entrance is a window for lighting the corridor, over each of which is also a gablet and finial. At the east corner there is a stair with a window leading to the gallery, and over the stair is a sharp-pointed roof, with an ornamental vane terminating about 50 feet from the ground. Above the entrance is a wheel window for lighting the east gallery, with columns and pierced tracery. At the south corner rises a square tower and spire, together 135 feet high in mason-work. The spire is octagonal, and has four windows filled in with pierced tracery, and surmounted by stone pinnacles with scale ornaments and gilt finials. A buttress at the corners of the tower terminates with stone pinnacles and gilt crosses. Through the tower is the entrance from Pilrig-street to the corridor and west half of the gallery. In the side of the church fronting Pilrig-street, which is the principal side, there are six windows beneath the gallery divided into two compartments by a small column in the centre, and having pierced tracery above; and the windows here, like the entrances, are surmounted by gablets and finials. The skews of these gablets terminate on carved corbels. Two gables are shown at this side of the church; and in each of these is a large window to light the west gallery, arcaded in the under part, and filled with pierced tracery in the upper. Between the gables is an open belfry, terminating in a similar manner to the pinnacles above the buttresses of the tower. In the north-west end of the church is also a gable, and in it there is a rose window similar to the one fronting Leith-walk. The windows on the north-east side of the church are not seen from the street, but as viewed from the inside they are similar to those fronting Pilrig-street. The church, though nearly square outside, from having staircases or rather enclosures at each of the corners, presents the appearance of a cross inside. There is a gallery at the south-east end and on each of the sides. The church will be seated for between 800 and 900 persons. The roof is supported by main couples, with laminated ribs springing from carved corbels, which also support the centre of the side galleries. All the windows are to be filled with stained glass, and already the principal windows have been finished. The wheel or rose window at the north-west end of the church has been filled in by Messrs. James Ballantine & Son, of Edinburgh. The wheel window at the other end of the church, and the side-windows of the gallery, have been filled in by Messrs. Field & Allan, Leith, with glass not much obscured. The other windows are also to be finished with stained glass, but without any pretension to a high order. The church will be heated by a hot-water apparatus and pipes fitted up by the Shotts Iron Company. At the north-west end of the building are a large meeting-house and waiting-rooms, in keeping with the church, and which will have windows of cathedral glass. The whole structure, including site and erection, it is calculated, will cost about 6,000*l*. The builder is Mr. G. Lorimer, Edinburgh; wright, Mr. J. Cowie, Edinburgh; plasterers, Messrs. Marshall & Sutherland, Leith; slater, Mr. W. Anderson, Edinburgh; plumbers, Messrs. Thomson & Co., Edinburgh; and clerk of works, Mr. Munro.

STAINED GLASS.

Ripley Church (*Yorkshire*).—Two memorial twin-light windows have been erected in this church; the one by Mrs. Lloyd, of Hazelcroft, in memory of the late Prince Consort; the other in memory of Mr. Richard Rawson, and daughters. The windows range with each other, are the same shape, and have been treated similarly. They are chiefly filled with deep coloured geometric combinations and foliated borderings; and in the central spaces of the four upright lights the figures of the four Evangelists are introduced. Messrs. Ballantine & Son, Edinburgh, were the artists.

Prestolee Church (*Lancashire*).—The glass for the large east window of this church, which was in the International Exhibition, but was marred by the imperfect light there, has now been fixed in its place. The subject, viz.—the Crucifixion, is carried across the entire breadth of the window, each compartment having its separate canopy, base, and mosaic groundwork. The top tracery is filled with angels bearing inscriptions, with rich borderings. In the base are sacred emblems and appropriate texts. This window, erected in memory of the late Mr. Thomas B. Crompton, of Farnworth, is also the production of Messrs. Ballantine & Son, Edinburgh.

SCHOOL-BUILDING NEWS.

Croydon.—The formal opening of St. Andrew's New Schools, Croydon, has taken place. The building, which is now complete, is situate at the junction of the Southbridge-road, within a score steps of the south side of St. Andrew's Church. The industrial department, says the *Surrey Standard*, will be devoted to teaching girls those domestic accomplishments which the females of the present day are so glaringly deficient in; for they will be taught to make and bake bread, to wash, to sew, make a shirt, put buttoms on, darn, iron linen, and many other little arts which too many girls and their mammas of the present day denounce as vulgar.

Diss.—The new national school just erected for the parish has been opened. The building stands on a piece of glebe given for the purpose, and is the design of Mr. Atkins, jun., of Diss; Messrs. Bishop & Ward, of the same place, being the contractors, at a cost of 730*l*. The school is 65 feet long and 18 feet wide, exclusive of a class-room, 20 feet by 12 feet; and the roofs are open. The materials are red brick, with black and white dressings. The north side, with its bell-gable, is the most ornamental. Room is left on the south side for a separate girls' school to be erected hereafter.

PROVINCIAL NEWS.

Oxford.—At a recent meeting of the local Board of Guardians the chairman said that the building committee had recently resolved that the making of the road in the front of the new workhouse should be contracted for, according to Mr. Fisher's specifications. It was also ordered that the fencing should be contracted for at the same time. They had received four tenders, viz., 230*l*., 227*l*., 165*l*. 10s., 164*l*. After some discussion, it was proposed that the lowest tender, being that of Mr. J. Cripps, be accepted, and this was carried unanimously.

Brighton.—The directors and guardians have instructed their surveyor to prepare plans and specifications for a new workhouse, under the direction of a committee, the same to be complete and ready for public competition, and for which he is to be allowed the sum of 120*l.* The opinion of the committee is, that the new workhouse should accommodate 800 persons.

Worcester.—The City and County Bank business has been transferred from its old premises, opposite the Star and Garter Hotel, to the new building just erected for the purpose at the Cross. The building is in the Italian style, three stories high, constructed of a light-coloured free-stone from the Blockley quarries, and which our authority (the local *Herald*) states is equal in appearance and durability to the Box-tunnel stone at Bath. There are south and west frontages and side entrances, but the principal doorway is under an arch in the west front, having duplicated columns of polished rose-granite on each side, with panelled pedestals. The windows in both fronts have columns, with carved capitals, balusters, and pediments; and the stories are divided by cornices. The top of the building terminates in a cornice, with carved trusses and soffit, surmounted by a balustered parapet. The banking or principal apartment is a square of 32 feet, 17 feet high to the cornice, with a domed roof rising some 20 feet higher. There is an arcading all round the room, the pillars and capital of stone, and the other parts of Parian cement. The base of the dome light is encircled by cable beading with soffit modelled in birds and flowers. The frame of the dome light is of pierced iron work with diamond openings for lights. The fittings of the banking-room are of solid mahogany, the counter-front having carved cornices and moulded trusses, and the desks are furnished with open screen-work of bronze at top. The doors are also of mahogany. Closets and other convenient apartments are situate on the east side of the banking-room. On the south side of the building a stone staircase with light bronze balustrade leads to the upper floors. The ground floor is inlaid with Maw's encaustic tiles. Mr. Elmsley, of Malvern, was the architect; and Messrs. Wood & Son were the contractors: the clerk of the works was Mr. Sutton. The carving was done by Mr. Forsyth. The cost of the building will be about 14,000*l.*

Bradford.—The prospectus of a new project for the erection of a theatre for Bradford has been issued. The site is in Manningham-lane, which has been objected to by a correspondent of the local *Observer* as not being central enough.

METROPOLITAN BOARD OF WORKS.

AT the weekly meeting of the Board on the 7th, Mr. Thwaites presided.

PUBLIC IMPROVEMENTS.

It was proposed by Mr. Carpmael, and seconded by Mr. Deputy Harrison, that instead of 10,000*l.*, the sum named in the estimate for contributions by the Board to public improvements, a rate of one penny in the pound be levied for the purpose, which it was calculated would produce 50,000*l.*

A long discussion took place, the result being that the proposition was lost, and the original estimate of 10,000*l.* was adopted.

MAIN DRAINAGE WORKS.

The following report from the engineer was read:—

"The unfavourable state of the weather during the past month has, to a certain extent, retarded the progress of the Main Drainage works. In connexion with the Middle Level Sewer, Messrs. Brassey & Co. have completed about 7 miles 2,400 feet of sewers, of sizes varying from 4 feet 6 inches by 3 feet to 12 feet by 9 feet 6 inches, at a probable cost of about 190,000*l.*, of which the sum of 10,000*l.* is due to the past month. The total value of the works executed under Mr. Furness's contract for the Northern Outfall Sewer is about 480,000*l.*, making 25,000*l.* for work done in the last month.

At the Southern Outfall Works, Crassness, Mr. Webster is progressing with the excavations for the engine and boiler houses, and for the reservoir. The concrete foundations for the former are being put in to a depth of 19 feet, and the brickwork for the latter is being commenced. The total cost of the works executed is about 30,000*l.*, being 7,000*l.* in excess of my last report. Messrs. Aird & Son's works at the Deptford pumping station are approaching completion. The total cost up to the present time is 94,000*l.* Messrs. Slaughter & Co. are getting in the pumps, boilers, and engines. In my next monthly report I hope to be enabled to state that Messrs. Lees & Bowles have completed their contract for the Southern High Level Sewer, and up to the present time they have executed works to the value of about 191,000*l.*, 3,000*l.* of which were expended in the last month. Rather more than two miles of the Southern High Level Extension Sewer have been completed by Mr. Pearson, at a cost of 11,370*l.*, of which about 1,400*l.* are due to the past month. Messrs. Aird & Son have made their arrangements with nearly all the parties through whose lands and properties the Bermondsey branch sewer is intended to pass, and they have sunk the three deep wells required for draining their works at different points, and have erected the necessary pumping-machine. A commencement of the works has been made at Jamaica-level, to the value of about 1,500*l.*, which, added to the preliminary expenditure, makes a total outlay of nearly 5,000*l.* upon this contract. Mr. Webster has completed about 4,500 feet of the Effra Sewer Diversion at Brixton, at a cost of about 8,000*l.*, and he has commenced the extension of the work in Water-lane."

"SEVERING" PIPING.

AT the Manchester City Sessions, before the Deputy Recorder, Mr. Higgin James Lawler was tried on an indictment, containing two counts, the first of which alleged that the prisoner had stolen several yards of lead piping affixed to a building; and the second, that he had ripped, cut, broken, and severed, with intent to steal the same property. The evidence of the principal witness (a police officer) who, in consequence of information received, had concealed himself in the building, was to the effect, that on Sunday, in the afternoon, the prisoner and his wife entered the building, the door of which was open; and, after lighting a candle in the lobby, they both went into the cellar. The prisoner then pulled down from the ceiling several yards of water-piping, and in doing so undid the staples by which it was fastened. A remark was then made that it was unsafe to remove the property at that time. The prisoner and his wife then left the building, but returned between six and seven; but while there two persons came to the door, and the prisoner and his wife, being disturbed, again left the building without, apparently, on this visit having touched the lead piping. The officer, who, after the first visit of the prisoner, had concealed himself in another part of the building, then rushed into the street, and the prisoner was subsequently taken into custody. His wife, who had been also taken into custody, was discharged. At the conclusion of the case for the prosecution, the Deputy Recorder called the attention of the counsel for the prosecution, Mr. Spence, to the indictment. The counsel contended that, under the second count, the prisoner was liable to be convicted, should the jury be satisfied with regard to the intent with which he separated the lead pipe from the ceiling. The learned Deputy Recorder, on consultation with the learned Recorder, Mr. R. B. Armstrong, Q.C., decided that, although the piping had been neither ripped, cut, nor broken, still it had been *severed*; and the only question for the jury was the intent with which the prisoner had severed the lead. The jury found the prisoner guilty, and he was sentenced to eight months' imprisonment and hard labour. The word "sever" was introduced into the Amended and Consolidated Larceny Act of last year, to obviate difficulties such as occurred in this case.

THE "USUAL" PAYMENT OF ARCHITECTS.

SIR CHARLES BARRY, in a letter to the *Times* of the 15th of February, 1856 (printed in that paper of the 18th), speaks of "the *usual* commission for the architect of 5 per cent.;" and we often hear the same expression now. When, I will ask, was that *usual* first in use?

I will refer to custom among architects, and to an earlier date than the birth of Barry.

Of the Rolls House, in Chancery-lane, Colin Campbell was the architect. The cost of the house—I quote the manuscript papers of the auditors of the Imprests from the Crown—was fixed at a certain sum; and on this sum Campbell claimed and received, as architect, *six*, not five, per cent.

P. C.

MAJOLICA FOUNTAINS.

SIR,—We have the pleasure to afford you a most satisfactory reply to your query as to the change in the appearance of our fountain at the Exhibition. In common with a portion of the public, you suppose that parts of the fountain lost their colour.* Nothing of the kind could occur. Majolica colours are fired to such a high degree of heat that they are unchangeable. We have some pieces at our works that have been exposed in the open air for a period of twelve years, and the colours are now as bright and firm as they were the first day they were put up. The appearance of a change of colour was solely caused by the water—not very clean and good—forming a vegetable deposit on the stonework, and washing the deposit upon the majolica. The majolica colours, as we have said, are indestructible and unchangeable; and we can safely promise that, by the simple application of soap and water, the fountain can be restored to its pristine beauty in a few hours.

MINTON & CO.

* At any rate, its aspect was abominable.—ED.

CONCRETE BRICKS.

WITH reference to the statement from the South Kensington Museum, Mr. Sumner, the maker of the concrete brick, suggests to the maker of Chilton's Suffolk brick that it is easy to institute some experiments that *can* be quoted as correct; and says he will produce a brick "made of lime and sand that will bear a pressure of twenty-five tons; the prime cost of which will not exceed 15s. per thousand." He adds:—"The question of concrete bricks is certainly one of great importance, and will shortly be brought very prominently before the public. At Reigate, for example, arrangements are on the *tapis* to work the enormous beds of sand here, and push it into the London market. The Government has recently bought twenty-two acres of land here for a military hospital, the whole of which is a hill composed of sand 100 feet thick. The proposal submitted is that the boys from the Philanthropic Reformatory at Redhill (within half a mile of the spot) should make bricks out of the material on the spot, and which does not require skilled labour. Even with hand labour the prime cost would not reach 22s. per 1,000, and with machinery much less."

LAW OF LANDLORD AND TENANT.

The Mayor and Corporation of Hythe v. *East.*—In this case (at the Vice-Chancellors' Courts), about ten years since, the plaintiffs sold to the defendant a piece of land abutting upon the sea and forming part of a site upon which a terrace has been built, and in the conveyance of that land there was a covenant on the purchaser's part that he would build a house of the value, at least, of 1,200*l.* Subsequently it was found necessary to file a bill against him for specific performance, and an order was made to complete, followed by a petition for directions to give the plaintiffs the benefit of the decree. Upon that petition, which was presented in 1861, the Court directed a completion within six months, but, that not having been complied with, a motion was now made to commit for non-obedience to that order. The motion was accompanied by several well-executed photographs of the *locus in quo*.

Mr. Baily and Mr. Dauney appeared in support of the motion.

Mr. Eddis, for the defendant, said that great difficulties had occurred in the progress of the work, both as to materials and other necessary matters.

The Vice-Chancellor said that the covenant referred to a complete edifice, and therefore it had not been complied with. If there was any obstacle on the part of the corporation, of course he would not visit it on the defendant; but, to render it unnecessary to come back to the Court, he should direct that unless the defendant proceeded to obey the order before next seal, the order for committal must be made.

MINSTER CHURCH.

SIR,—I am sure the architectural profession must feel greatly obliged to Messrs. Smith & Son, of Ramsgate, for their candid observations to you, printed in your last number, respecting the reinstatement and alterations now in progress at Minster Church, Thanet, Kent. But I think many of them will consider, with me, that more should be told. It is this. Messrs. Smith & Son are not only the *architects* of the above works, but the *builders* also. If, therefore, they manage to complete the job without considerable dissatisfaction, both in the character and cost of work done, they may consider themselves very fortunate, more especially as I believe the cost, when all is done, will far exceed what was in the first place anticipated.

A RATEPAYER.

COMPENSATION FOR DAMAGE BY OBSTRUCTION.

Senior v. *Metropolitan Railway Company.*—On the 8th, at the Sheriffs' Court, Red Lion-square, a question of considerable importance was raised before Mr. Serjeant Hayes, assessor, and a special jury, in this case, which was a claim made by a tailor, carrying on business at 7, Ray-street, Clerkenwell, for a loss sustained in his trade by the obstruction of the thoroughfare caused by the works of the railway.

Mr. Keane, for the claimant, waived any claim for structural damage to his house, and claimed about 100*l.* for the loss of trade caused by the stoppage of the thoroughfare.

After several witnesses were examined,

Mr. Lloyd submitted that, under the Lands Clauses Act, compensation could only be given for land taken or injuriously affected. To admit such a claim would be to open a door to some hundreds of actions.

Mr. Keane referred to a case called "The Pickled Egg," which was now pending in the Court of Queen's Bench, and suggested that the present proceeding should be turned into a special case for the Court above.

Mr. Lloyd declared that if the principle contended for on the other side prevailed, there would be an end to all public improvements.

Mr. Serjeant Hayes thought the best course would be for the jury to assume a claim for compensation, and the matter would go before the superior court. He could not stop the case whilst the law remained in its present state.

The jury assessed the compensation at 60*l.* for the loss of trade by the obstruction, and asked whether the present would stop all other cases until the question was settled.

Mr. Serjeant Hayes was afraid not, though it would be desirable.

PATENTS CONNECTED WITH BUILDING.

Improvements in the Means and Apparatus employed for Insulating and Protecting Telegraph-conducting Wire, and in Apparatus for working the same.—*C. W. Siemans.* (Partly communicated.) Dated Jan. 9, 1862. Here, according to one part of the invention, the patentee forms the conductor either of a solid metal wire, or of a strand of two or more wires; or he sometimes first forms a strand of seven equal-sized wires, and then winds into the said helical recesses formed between these wires six other conducting wires of a smaller diameter, so as to cause the form of the complete conductor to approximate to that of a cylinder, which form would present the least surface for induction for a given sectional area. He causes the conductor to pass through a vessel containing a compound of gutta-percha, resin, and Stockholm tar, in a heated or semi-fluid state. The wire or strand of wires passes into and out of the vessel through holes or dies formed in the sides of the same. The conducting wire is next passed through a bath of cold or iced water, then passed round a series of rollers or reels so as to harden the coating: it is then coated with india-rubber, and finally with gutta-percha. In making joints in the india-rubber covering of the conductor, he overlaps the uncovered part with india-rubber strips, and completes the formation of the joint in a specially-constructed apparatus.

Improvements in Preserving Timber, which are particulary applicable to Timbers of Ships or other Maritime Structures.—*W. Clark.* (A communication.) Dated Feb. 7, 1862. This consists: 1, in depriving the wood of its sap, and, consequently, of its fermenting properties; 2, in submitting the wood to an artificial desiccation; 3, in singeing the face of the wood, when the work is finished, by a slight carbonization. To deprive the wood of its sap, it is plunged in soft water, which, being less dense than the sap juices, forces out the latter, and fills all the fibres of the wood in its turn. The wood is dried by means of an apparatus of Messrs. Légé & Henry Piromet, for injecting poplar and beech woods with sulphate of copper. The wood is now ready to receive a current of heated air, with which a certain quantity of sulphuric acid is mixed, which prevents the formation of fungi on ships' bottoms. A paint composed of sulphur, linseed oil, and boiled oil, is applied to the bottoms of ships. The surface of the wood is charred by a jet of gas.

Ornamenting Wood in Imitation of Inlaid Work.—*T. Bray.* Dated February 27, 1862.—The patentee coats the surface to be ornamented, which should be of white or light-coloured wood, with glutinous matter. That which he finds most suitable is prepared by boiling spatches (or cuttings of the skin of calves' faces, and which are to be obtained from the makers of weavers' pickers) in water. He simmers one pound of spatches in four quarts of water for about four or five hours, and then strains the liquid: on cooling it sets into a jelly; which, however, is so thin as to flow freely when beaten up with a brush: if the jelly is found to be too thick it should be reduced with water. This preparation he applies to the surface with a soft brush, in a thin, even coat, which is allowed to dry. After the glutinous coat is dry he applies to the parts of the surface, which are to appear as white or light-coloured, a spirituous preparation of gums and other materials. This he does with a painter's pencil, either with or without the aid of stencil plates. The spirituous preparation he prefers is composed as follows:—One pound of gum merthe and half a pound of gum turpentine, dissolved in two gallons of spirit of turpentine; and to the solution is added half a pound of spermaceti and half a pound of yellow soap: these two materials being melted together are added to the spirit solution, and well mixed therewith when in a melted state. The desired pattern or design having been traced on the surface in this preparation as above described, and the preparation so applied being dry, he stains the whole surface with a water stain.

Chimneys or Flues.—*J. G. Jennings.* Dated March 1, 1862.—The invention is applicable more especially to chimneys or flues used in connexion with open fire-places. In order to prevent the smoke being forced out into the room in which the fire-place is situate, by a sudden puff of wind descending the chimney, the patentee enlarges the chimney at a short distance over the fireplace, by building into the brickwork a chamber made either of earthenware or cast-iron, and having both an inlet and outlet passage corresponding in size with that of the flue. He prefers to make this chamber hexagonal, as it appears when in position in front and back view, and with flat ends. The inlet and outlet passages also, which are generally opposite the one to the other, he prefers to form as sockets to receive the ends of earthenware pipes, of which he usually forms the chimneys or flues. The chamber may be made in one piece, and it is preferred so to make it; but it may be formed in two or more pieces if desired. The employment of chambers in this manner admits of the use of much smaller chimneys or flues than those usually employed in combination with open fireplaces.

Horticultural Buildings.—*G. H. & H. R. Cottam.* Dated 4th March, 1862.—For the purposes of this invention the metal rafters, or the sashes or parts to be glazed, are formed with a succession of steps, according to the number of sheets of glass to be used from the top to the bottom. When walls are used in constructing a building, the rafters are connected therewith by metal plates in the form of inverted troughs; either extending the whole length of the building, or else at such intervals apart as will suit the distance apart at which the rafters are desired to be attached to the wall. Where required, tie or gauge rods or bars are applied to retain the rafters in position. The rafters may, in some cases, in place of being straight, be made with two or more slopes. When using wrought-iron sash bars, in order to connect them to the structure or to each other, cast-iron sockets are used, which are fixed to the ends or other parts of the sash bars by pins or rivets, or otherwise; and, when required, such cast sockets are made with branch sockets at a right angle, or such other angle as may suit the angular direction in which it is desired to fix the ends of other sash bars to the primary one to which the socket is fixed. At the surface of the ground, where necessary, a sill or bar is fixed or applied in any convenient manner, but it is preferred to employ a row of wood posts or stakes driven into the ground, the parts so driven being well charred.

Improvements in Machinery for Mortising Wood.—*J. L. Perin.* Dated April 17, 1862.—This consists in the use of a rose drill or fraise, to which the patentee imparts three self-acting motions;—the first, a rapid rotary motion, for cutting away the wood; the second, a to and fro movement, which is determined by the length of the mortise to be cut; and the third, a penetrating motion, according to the depth of the mortise to be cut. The two latter motions, if necessary, can, however, be imparted by hand. The timber operated on remains stationary during the triple action of the drill. In order to square out a mortise hole thus obtained, he makes use of a right-angled tool, which is impelled by hand. He also attaches to the machine embodying the improvements in drilling machinery to pierce round holes preparatory to mortising, or for other purposes, if necessary.

Books Received.

Transactions of Architectural Institute of Scotland. 1861-2. *Illustrations of Scottish Buildings.*

In accordance with a resolution passed in 1857 that there should be annually published for distribution amongst the members a series in folio size of at least five drawings of ancient, Mediæval, or modern buildings at home or abroad, the council have issued the first part. It includes two long drawings by the late Mr. Hamilton, of the old West Bow of Edinburgh, and four pages of interesting details, two from Inchmachome Priory, by Mr. E. F. C. Clarke; and two from Holyrood, by Mr. A. C. Beattie; from measured drawings for which the prizes of the Scottish Institute were awarded.

The council congratulate themselves on having obtained the drawings of the old West Bow. We must, for our own part, express an opinion that they seem wholly devoid of architectural interest, and more suited to the publications of the Glasgow Archæological Society than of the Architectural Institute. We say this with a view to the future.

Hand Catalogue of Postage Stamps for the Use of Collectors. By John Edward Gray, Ph.D. of British Museum. London: Hardwicke. 1862.

Although we cannot go exactly so far as Dr. Gray, who maintains that postage stamps, if properly arranged and studied, may be quite as instructive and entertaining as the collection of birds, shells, engravings, books, or coins, we are quite satisfied that the collecting and arranging of postage stamps has a very good effect, especially with the young, and should be encouraged. It educates the mind to observation and comparison; excites curiosity as to the various countries from which they come; and in some cases leads to a consideration of the art, or want of art, shown in the production of them. More than twenty little books, English, French, and German, as guides to collectors, have been already published; but Dr. Gray has, nevertheless, made a desirable addition to postage-stamp literature. Moreover, he has a special right to the subject, inasmuch as he was the first who proposed the system of a small uniform rate of postage prepaid by stamps; afterwards carried to a successful issue by Mr. now Sir Rowland Hill, with the assistance of Mr. G. Moffat, Mr. Henry Cole, and others.

The list is arranged geographically, commencing with the stamps of Great Britain and her colonies.

VARIORUM.

The *Publishers' Circular* for December gives a large number of wood-cut illustrations from the illustrated books of the season, and serves to show what is now being done in this way. We are not amongst those who think our illustrators are doing exactly what might be expected of them. ——The *British Workman* and the *Band of Hope Review* still maintain an excellence in their cuts which, at the small price of these journals, nothing but a very large circulation could pay for.——The Christmas number of *London Society* is a gay one and a good one. It is illustrated by Alfred Crowquill, G. du Maurier, McConnell, F. R. Pickersgill, Poynter, Morten, J. E. Millais, J. D. Watson, Florence Claxton, Adelaide Claxton, G. H. Thomas, and C. Green. Endeavours will be needed to prevent the engravings having a sameness.—— The current number of the *Gentleman's Magazine* contains an illustrated article on "The Ironwork of [in?] Westminster Abbey."——"A Treatise on Logarithms," by the Rev. John Hunter, M.A., has been added to "Gleig's School Series," published by Messrs. Longman & Co. A knowledge of logarithmical arithmetic being now frequently required in candidates for public examination, the publication of this cheap and excellent little volume is well timed.—The Calcutta *Engineers' Journal* contains a notice of Col. Kennedy's Iron Bridge system, on the Bombay and Baroda and Central Indian Railway.

Miscellanea.

The Church of St. Ethelburga, Bishopsgate.—This church has for some time been undergoing extensive alterations and repairs, whilst the interior has been entirely refitted. The *City Press* says:—"The whole of the pews and galleries have been removed, and the floor has been laid with Minton's tiles; whilst the organ has been enlarged, and placed upon the floor, to the south of the altar. The nave and aisle have been fitted with open seats, and the church has been lighted. The chancel is now separated from the nave by a dwarf screen of Caen stone. A new stone pulpit has been fitted. There remains much to be done."

Railway Returns.—The traffic receipts of the principal railways of the United Kingdom continue to contrast favourably with the earnings at the corresponding period of last year, as will be seen by the subjoined particulars as to a few of the more important lines for the week before last:—

	1862.		1861.
South-Eastern	£18,181	....	£16,770
Great Eastern	26,170	....	26,076
Great Western	52,483	....	50,409
Great Northern	28,187	....	27,914
London and North-Western	84,705	....	81,432
London and South-Western	18,877	....	16,152
Midland	38,716	....	38,810
North-Eastern	41,156	....	40,150
London and Brighton	16,057	....	14,821
North British	10,791	....	10,296

CONSOLIDATING CAST-STEEL.—Mr. J. M. Rowan, of Glasgow, proposes to consolidate cast-steel, or metal produced by the pneumatic process, by compressing it whilst still liquid or nearly so, whereby it is rendered much better adapted for subsequent processes.

THE LEICESTERSHIRE ARCHITECTURAL SOCIETY. The November meeting of this Society was held in the Town Library, Guildhall, Leicester, on the 24th ult., and was numerously attended. The Rev. Robert Burnaby, M.A., occupied the chair. Some general and financial business was transacted, and honorary members were elected. There was the usual exhibition of antiquities, &c. At the close of the exhibition, Mr. James Thompson called the attention of the Society to the state of the excavations at Wroxeter; and it was resolved that a memorial to the Government upon the subject of a grant in aid of the operations now being carried on should be prepared, and, if thought desirable, adopted at he next meeting of the Society.

METROPOLITAN BENEFIT SOCIETIES' ASYLUM.—This is the only institution in the kingdom for the special benefit of members of friendly societies. To the credit of the metropolis be it said, that a few working men in it founded this institution in 1829. The building in Ball's-pond-road, Islington, was not commenced till 1836, but was at once filled; and in 1853 a wing was added; the total cost being nearly 6,500*l.*, collected in small sums, aided by gifts from Lord Ebury, Alderman Copeland, and other friends of the cause. The first important bequest to the asylum fell in this year, under the will of Mrs. Mackenzie. The amount was 8,500*l.* The income is to be paid to the inmates. A considerable outlay has just been made in the repair and ornamentation of the building. The works were executed under the direction of Mr. H. S. Ridley, architect, by Mr. Grover, of Islington.

GERMAN ANTIQUITIES.—In the *Revue Contemporaine* we find an interesting archæological article by Dr. Frœhner, from which we glean the following items:—In Styria, a great number of tumuli have been opened, called by the people "Pagan cones." They are chiefly met with in groups of from twenty to thirty, in the midst of clumps of trees and on the banks of rivers. They all contain long coffins made of wicker-work; but those tumuli that contain skeletons are considered to have been graves for the poor, on account of the few objects of value which are found in them: those, on the contrary, in which the ashes of dead bodies are found, also contain bronze arms and ornaments, evidently the work of native artists, but bearing a strong affinity to Etruscan art. Thus, for instance, two votive hands, skilfully made of bronze plates, have been brought to light, as also three small shields, adorned with designs of animals and men executed in relief. All these objects are chiselled after the Etruscan fashion. At Sigmaringen, on the Upper Danube, a Roman camp surrounded with ramparts has been found, with the house of the general, that of the treasurer, and other buildings still discernible.

THE INVENTOR OF THE FIRE-ESCAPE, ABRAHAM WIVELL.—Wivell now took to scheming,—dreaming, some of his friends said. He proposed a plan for draining London independently of the Thames—for, said he, if all the sewers drain into the Thames, the Thames itself must become one great sewer. But this scheme fell to the ground—it was too far in advance of the times. His fire-escape was more successful; but, poor fellow, how sedulously he worked at his idea, and what time and money he spent before the design of his brain was embodied in tangible wood and iron. His first escape consisted of a rope, fastened in the inside wall of the upper story of the house, and a belt which was to be girded around the body of the person escaping, and was also to be attached to the rope. With such an apparatus, Wivell frequently descended from the topmost room of his house, to the wonder of the surrounding neighbourhood. Although he had demonstrated the practicability of this plan of escape, people were slow to adopt it, and further thought led to the production of the well-known fire escape, now happily found at the convergence of most of our principal London thoroughfares. Even after he had completed his escape, he could not for a long time get any help in bringing it out. But he was enthusiastic and persevering; and he at length succeeded in calling a public meeting, when he explained his plan in detail. The formation of a committee was the result of this meeting, and Wivell was awarded with the expenses of his escape, and—a gratuity of 10*l.*! Ultimately, the Royal Society for the Protection of Life from Fire was formed, and Wivell's invention was adopted.—*Social Science Review.*

OPENING OF THE BOULEVARD PRINCE EUGENE, PARIS.—The inauguration of the Boulevard Prince Eugène was celebrated with great magnificence on the 7th inst. Immense crowds were present, and all passed off pleasantly. The boulevard is a continuation of the grand plan of new Paris decided on long since by the Emperor. Like the Boulevard Sebastopol, it will present a straight line of white stone houses, a wide road, and spacious pathways planted with trees, and provided with seats for the public. Here and there open spaces occur in this long cut, beginning where stood that nest of small theatres of the Boulevard du Temple, and ending at the Place du Trône, a distance little short of a mile.

DAMAGE TO WALLS: HART *v.* THE METROPOLITAN RAILWAY COMPANY.—This was an action brought in the Court of Common Pleas by a publican carrying on business in the Edgeware-road, against the contractors for the Metropolitan Railway, for compensation in damages for injuries occasioned to his house in the Edgware-road through the alleged negligence of the defendants' servants. The defendants pleaded that the damage was occasioned by the leave and license of the plaintiff. It appeared that the excavations had been carried some few inches beyond the plaintiff's wall underneath his house. The consequence was that the wall was so shaken and had sunk to such an extent that it was unsafe to live in the house. A surveyor was called in, and he at once ordered the walls to be shored up, strengthened, and repaired, for which the plaintiff paid 37*l.* There was a claim for loss of business, &c. The defendants consented to a verdict being entered for the plaintiff—damages, 120*l.*

MR. BELLEW'S NEW CHAPEL.—Sir: Looking into Bedford Chapel, Bloomsbury, a few days since, I was astonished and pleased to find the dirty, dingy, and hopeless-looking interior renovated with various colours and tints. The effect is quite refreshing when contrasted with the heavy appearance and want of colour so overpowering in most classic neighbouring churches. On inquiry I find that Mr. Lewis Stride was the architect. The credit for new desk, pulpit, gasfittings, &c., is due to Messrs. Cox & Sons; but Gothic work appears to be out of place in such a building. The organ has been erected by Messrs. Davidson & Son. My excuse for taking up space in your Journal is the rareness of examples of coloured interiors free from what is considered by the public "gaudiness of effect," and the hope that various colours may be more commonly used in churches until we can afford the High Art paintings so much to be desired.—F. R. I. B. A.

BAD DRAINAGE AND BAD WATER.—It is a very common error to suppose that, because we see so many robust men and women in a neighbourhood, that neighbourhood must be healthy. We can only judge of the health-producing properties of a locality by reference to the registrar's report of the births and deaths. The weakly and unhealthy come within the poet's category of the good—they die young. We often see in the crowded courts of London a group of robust children playing about, and in a hasty manner conclude that there is nothing in that court which deteriorates from health and longevity. But we turn to the Registrar-General's report, and we find that fever has carried off within the last few months a tenth of the inhabitants, which gives the value of each life, under such conditions, at ten years. When the cholera was raging in London, in the year 1849, the south, although the most open, suffered in a ratio of three to one to the north. Why? Because the south was badly drained, and its inhabitants drank impure water; while the north, although far more densely populated, in some places to the extent of 200,000 people to the square mile, was better drained, and its denizens drank water drawn from a purer source. In many agricultural districts the drainage is totally neglected; and the water, if cared for at all, which is sometimes not the case, contains far too large a quantity of vegetable and animal matter to render it fit for human consumption. Many animals, better judges by instinct than man with his reasoning faculties, will not touch water in an impure state. What, then, is the effect of bad drainage and impure water upon the human being? Why, a relaxed nervous system, which permeates every action of the individual. Hence we find the sluggish gait and drawling voice of the agricultural labourer. He is content to "live and move and have his being" in a state of mental and moral torpor little removed from the quadruped whom he tends. Give him a well-drained cottage and pure water, and his condition is instantly changed.—*Social Science Review.*

ADDITION TO THE NATIONAL GALLERY.—It has been stated that the Marquis of Hertford has intimated his intention of leaving his splendid collection of pictures to the nation.

NORTHAMPTON ARCHITECTURAL SOCIETY.—At a meeting of the committee; Mr. De Wilde in the chair; Mr. Irvine, at some length, examined the entries in the Expense Rolls relating to Queen's Cross, with special reference to those obviously technical terms—"pro flecchiis; pro cariagio capitis et lanceæ; pro factura virgæ et anuli" "et pro agnis de marmore," this last the most perplexing of all. Professor Willis interpreted it as implying that there was an Agnus Dei on the cross. Mr. Irvine believes that it refers to certain squares of marble, the original steps which surround the cross having been of marble, and the nominative of agnis being not agnus, but agna. There is, it seems, in Dorset, a large block of stone popularly known as the agglestone. Mr. Irvine thinks John de Bello was a mere walling mason and setter, not an architect.

ABATTOIRS FOR CROYDON.—At a recent meeting of the local Board of Health, the surveyor laid before the Board a plan for the erection of abattoirs, and estimated the cost of construction at 950*l.*, to include every outlay. This would provide one public and one private slaughter-house. Additional slaughter-houses could be added if they should be required. Dr. Carpenter said he had no doubt but that these slaughter-houses would pay for their erection. The Board was bound to provide this accommodation as in the special district it had refused to grant any more slaughter-houses licenses, by which a monopoly was given to those butchers who had license to slaughter. He moved that the surveyor get out estimates that tenders for erecting the buildings be obtained. The consideration of the question of providing the necessary funds was adjourned, but the motion of Dr. Carpenter was put and carried.

THE DRINKING-FOUNTAIN MOVEMENT.—A drinking fountain has been placed in the public gardens of the Lichfield museum and free library by Mr. T. Rowley, M.D., a magistrate of this city. It is a Byzantine structure of considerable size, formed of Bath stone and white bricks. The principal feature of the design is the centre group of stone carving, which represents in high relief the Scriptural story of our Lord's interview with the woman of Samaria. At the foot of this group the water flows into a basin of hard stone, through some scroll work of zinc. Lower down and near the ground is a drinking trough for dogs. The centre group is flanked by double sets of ornamental pillars, with foliated capitals, from which springs an arch, bearing in gold letters the sentence, "Whosoever drinketh of this water shall thirst again, but whosoever drinketh of the water that I shall give him shall never thirst." The whole is mounted by a pediment crowned by some carved water-lilies. The work has been executed by Mr. S. P. Wood, sculptor, Lichfield.

A TWO-MILE BRIDGE.—A prospectus of, or rather proposal for, a railway bridge, to be called the Royal Victoria Bridge, and which is intended to cross the Severn at the New Passage, has been published. The projector is Mr. S. B. Rogers, of Newport, who tells us his bridge would be built on a rock foundation for nearly its entire length (two miles), and the bases of the piers would be dry for nearly three hours every tide; so that, in fact, this bridge would be built upon dry ground. The structure its author intends shall "consist of twenty-five grand arches, with spans varying from 150 to 300 feet (exclusive of seventy-two smaller water-way arches, varying from 30 to 60 feet spans), with an elevation of 210 feet from low-water mark; so that ships of the largest dimensions may safely pass through these grand arches." On the piers and platforms there are to be "several hundred houses, shops, exhibition-rooms, sites for statues and monuments, in commemoration of the patrons of the undertaking and others who may distinguish themselves by 'merit or talent' in this affair; together with refreshment-rooms, and suitable conveniences for a sort of permanent 'International Exhibition.'" The reader who remembers an old plan for stone-bridging over the Avon at Vincent's Rocks, and making a miniature town of bazaars, &c., in the arcaded piers, will discover some resemblance between the two proposals. The prospectus states that the bridge "will bring all the towns, works, mines, and manufactures of Monmouthshire, and many of those of Glamorganshire, within an hour's ride by rail of Bristol Exchange." Mr. Rogers is the same gentleman who some years ago started a project for supplying London with gas "by railway" through iron pipes from the Welsh furnaces.

Laying on Music.—Some of our readers will recollect of an endeavour, a good many years since, to lay on music like gas or water. The idea seems to have been revived. The Paris correspondent of the *Journal du Havre* says:—"An experiment of an electric piano has been tried at the palace of Compiègne. The inventor, who is a native of Trèves, gives to the instrument great power, and the air played was repeated on another piano placed at the other extremity of the palace. He asserts that while playing a tune in Paris, he can have it repeated instantaneously at St. Petersburg, provided the electric wires are intact."

The Tallow Tree in Algeria.—This remarkable tree, a native of China, and called by botanists *Croton sebiferum* or *Stillingia sebifera*, has now been successfully acclimatized in Algeria, through the exertions of the French Government. Its cultivation would diminish the cost of candles. A tree ten years old, according to *Galignani*, yields from one to two kilogrammes of tallow: fifteen years later it will yield from three to four. It requires no care or watering; and may be planted on the roadside. In the island of Chusan large quantities of oil and tallow are extracted from its fruit. In hot weather the candles made with the tallow are apt to become soft, and even liquid; but to guard against this inconvenience they are dipped into wax.

Electro-telegraphic Progress.—Another attempt is about to be made to raise the necessary capital for testing the great experiment of uniting this country with America by means of submarine telegraphy. It appears, also, that the directors have received a tender from Messrs. Glass, Elliott, & Co., who agree to make and lay a cable from Ireland to Newfoundland, on conditions peculiarly favourable to the company. The Gutta Percha Company have recently published a list, which shows that fifty-one submarine cables have been undertaken between 1851 and 1862, and that the entire number, with the exception of seven, are at this moment in good working order. Since the failure of the old Atlantic cable, however, important discoveries have been made by Professor Wheatstone, Professor Thomson, Mr. Fleming Jenkin, and other electricians.——A New York paper states that on the 13th ult. a telegraphic despatch was sent from New York to San Francisco between four and five in the afternoon, and the answer was received between six and seven,—long before the hour had arrived at San Francisco at which the original message was sent from New York. The distance is about 3,500 miles; considerably exceeding the distance from Newfoundland to Valencia; and, says the New York paper, greater than any circuit ever yet worked in the history of telegraphy.

Doings at St. Patrick's Cathedral, Dublin.—The *Oxford Herald* says,—"It is a somewhat strange fact that the most costly work of cathedral restoration in the empire which this restoring age has witnessed should be in progress in Dublin, and at the cost of a private person. Mr. Guinness, it is said, is expending 80,000*l.* upon the renovation of St. Patrick's Cathedral. All praise to him for such magnificent generosity. It is, however, to be regretted that he relies upon himself as his own architect in this important undertaking, in place of giving the opportunity to some leader of the ecclesiological school of producing a work in which archæological accuracy in the treatment of the structure might be combined with invention in the fittings. The octagonal pillars of the nave are certainly plain, but we should imagine that there can be little question that they are original. They are now being transformed into clustered columns. This proceeding may add to the richness of the general effect, and bring St. Patrick's more into comparison with the cathedrals of England; but it alters the historical appearance, and detracts from the archæological identity of the old pile. We should accordingly have recommended a strict restoration of the ancient features, followed by as much decoration as the building would stand. Occasionally, too, the workmen seem to have been allowed to follow their own fancies in the foliaged capitals. The canopies of the tabernacle-work in the choir are to be reinstated. The cursory examination which we had of the building does not allow us to enter more into details. The external pinnacles, which are being reinstated as octagonal broach spirelets, are far from ornamental; but in this case we believe that Mr. Guinness is making good what he found there. We noticed a Crimean window in the nave, which struck us as one of the most inappropriate for a cathedral we had ever come across. The most conspicuous feature in it is a panel with a landscape of Sebastopol, enamelled in colours on a single piece of glass."

Effects of Iron Plating.—A communication from Toulon, in the *Messager du Midi*, says:—"The laying up of the frigate *La Gloire* in the Castigneau dock has disclosed three unexpected phenomena: first, that the contact of the copper lining and the submerged iron plates had established a galvanic current, which produced the effect of a voltaic pile, and was completely deteriorating the iron armour of the frigate in the parts below the water line; secondly, that a species of shell-fish, hitherto unknown, was afterwards discovered among the millions of molluscæ by which the hull was covered, apparently produced under the influence of the same galvanic current; and, lastly, in the hold of the vessel 22,000 litres of wine were found to be transformed into vinegar, it is not known by what influence."

Waterloo Bridge.—The half-yearly meeting of the proprietors in the Waterloo Bridge Company has been held. The report stated that the amount of tolls for the half-year ending August 23, had been 11,985*l.* 9s. 4d. For the corresponding period of the preceding year they were 11,100*l.* 19s. 3d., thus showing an increase of 884*l.* 10s. 1d. Of this increase, 530*l.* 1s. 1d. had arisen from the horse and carriage toll, and 354*l.* 9s. from the foot toll. Since August there had been a further increase, amounting in horse and carriage toll, to 397*l.* 2s. 11d., and in foot toll to 508*l.* The report concluded by congratulating the proprietors on the position of the company. The report was adopted.

The Waterloo Road Accident: Damages for Death.—In the Court of Common Pleas, an action, Robbins *v.* Jones, has been decided in reference to the fatal fall of pavement in the Waterloo Bridge-road. Mr. Robbins, the husband of plaintiff, was one of those who were killed, and his widow sued Captain Jones, of Norwood, defendant, for damages. It was at the instance of Captain Jones that the brokers, when the crowded pavement fell, were forcing their way into the premises of which he was the lessee, and of which Messrs. Jeffs, builders, were the sub-lessees, but the actual tenants of which had paid their rents to Jeffs. Captain Jones had also previously got notice to make the pavement sufficient. The jury gave a verdict for the plaintiff—damages, 280*l.*, apportioning 200*l.* to the widow and 80*l.* to the child.

State of the Sewage Works at Northampton.—The local improvement commissioners have resolved to request Dr. Letheby to report to them upon the state of their sewage works, and also as to certain ill-health in the Billing-road. The sewage works have been complained of as a nuisance, but some of the commissioners insist that they are no more a nuisance than if they were a chemist's shop. The commissioners also have had a discussion on a motion for inquiry as to the reason why the surveyor had sold some of the sewage at the works for a lower price than usual. It was explained, however, that the surveyor was obliged to do so, in order to get rid of it and make room for more; and the commissioners, by an amendment to the motion, declared themselves satisfied.

Eider Down.—This down the eider-duck plucks from its breast to line its nest: it and the eggs are taken away. Again the nest is lined, and again robbed. The third time, the drake repairs it, supplying the down; and if this be also taken away, the nest is altogether deserted by the ill-used pair. One nest yields about two and a half ounces of the finest clean down, or about half a pound in all if removed three times. What is plucked from the dead bird, it is said, possesses none of that wonderful elasticity which constitutes the value of the other. We should think, however, that this would depend on the state of the plumage at the time. Many thousand pounds weight of it are annually exported for quilts, pillows, cushions, &c. It sells in Iceland at from 10s. 6d. to 17s. 6d. per lb. From three to four pounds are sufficient for a coverlet, which, to be enjoyed in perfection, ought to be used unquilted and loose like a feather-bed. Quilting is only useful where a small quantity of down is required to go a long way; but, with three or four pounds at command, there is no comparison in point of comfort between loose and quilted—we have tried both. The eider coverlet combines lightness and warmth in a degree which cannot be otherwise obtained. With a single sheet and blanket, it is sufficient for the coldest wintry night. Its elasticity is proverbial; hence the Icelandic conundrum we had propounded to us by our good friend Mr. Jacobson, "What is it that is higher when the head is taken off it?" *Answer*—"An eider-down pillow!" — "Pen and Pencil Sketches of Faroe and Iceland." By A. J. Symington. (Longmans, 1862).

Monumental.—The monument in the Melcombe Regis Cemetery to the memory of the late Colonel Sir William Lockyer Freestun, K.C.T., has just been completed. It is about 21 feet high, and consists of an obelisk in polished dark grey granite, surmounted by an urn, and resting upon a Portland stone base, splayed with rockwork on the vertical faces. Near the bottom of the needle are the deceased's armorial bearings, in cast bronze, chased and emblazoned. The border round the base is paved with mosaic and tesselated tiles laid in a pattern. The inscription, which is short, is cut out in gilt block letters. The monument was furnished by Messrs. J. Wright & Son, of St. John's Works, Aberdeen, from one of their own designs. The fixing was done by Mr. Joseph Weakley, of Weymouth. The entire expense of the monument, including the purchase of the site, was 180*l.*

TENDERS.

For building two residences, at Hammersmith, for Mr. R. Weston. Mr. Wm. Paice, architect. Quantities supplied:—

George	£802 0 0
Henshaw	797 0 0
Bottom & Co.	789 0 0
Styles	778 0 0

For rebuilding 214, Piccadilly:—

Nicholson	£2,595 0 0
Macey	2,589 0 0
Carter	2,537 0 0

For the erection of St. Peter's Church, Vauxhall. Mr. J. L. Pearson, architect. Quantities supplied by Mr. H. F. Gritten:—

Carter (Holloway)	£7,943 0 0
Dove, Brothers	7,775 0 0
Carter (Eastcheap)	7,719 0 0
Trollope	7,694 0 0
Myers	7,320 0 0
Colls & Co.	6,978 0 0
Wardle & Baker	6,730 0 0
Longmire & Burge	6,387 0 0

For the completion of Christ's Church, Paddington. Messrs. F. & H. Frances, architects. Quantities supplied:—

	Tower.	Spire.	Total.
Hill, Keddall, & Co.	£2,490 ..	£1,800 ..	£4,290
Axford & Co.	2,150 ..	1,390 ..	3,540
Patman, Fotheringham, & Co.	2,087 ..	1,385 ..	3,472
Colls & Co.	1,750 ..	1,040 ..	2,790
Keyes & Head	1,590 ..	1,139 ..	2,729
Dove, Brothers	1,595 ..	1,045 ..	2.640
Fish	1,645 ..	990 ..	2,635

For the erection of a free Methodist chapel, Peel-grove, Globe Town, E. Mr. F. Boreham, architect:—

Hearle	£547 0 0
Ennor	435 0 0
Jay	392 10 0
Warner (accepted)	352 10 0

For gasfittings at the Stepney Union Workhouse, Bromley, Middlesex, under the direction of Mr. Henry Jarvis, architect:—

Stead & Son	£1,575 0 0
Clutterbuck	1,327 12 0
Parry & Son	1,080 0 0
Kilby	909 0 0
Carver	850 0 0
Humphery	720 0 0
Bacon	680 0 0
Huliett & Co.	649 0 0
Ismay	620 0 0
Basingham & Son	588 15 0
Berry	583 0 0
Comyn, Ching, & Co.	580 0 0
Seldon	560 0 0
Collinson (accepted)	550 0 0
Pitt	500 0 0

For a memorial to the memory of the late Prince Consort, at Walham Green, for the Butchers' Charitable Institution. Mr. Henry M'Calla, architect:—

	Portland Stone.	Coombe Down Stone.
Cairns	£3,099 0 0	—
Richards	2,556 0 0	£2,029 0 0
Dawson	2,489 0 0	2,000 0 0
Bond	2,328 0 0	2,278 0 0
Smith	1,673 0 0	1,648 0 0
Amy	1,643 0 0	1,520 0 0
Bingham	1,610 0 0	1,550 0 0
Henderson	1,485 10 0	—
Venton	1,230 0 0	—

For public house and three shop houses, for Mr. Woodin, Hoxton. Mr. Horace Field, architect:—

Piper & Wheeler	£3,400 0 0
Ashby & Son	3,333 0 0
Bishop	3,330 0 0
Turner & Sons	3,221 0 0
Meears	3,133 0 0
Pritchard	3,130 0 0
Scott	3,119 0 0
Manly & Rogers	3,100 0 0
Scrivener & White	2,865 0 0

For building a public house and house adjoining at Harrow-road, Paddington. Mr. J. Bird, architect:—

Clark	£2,271 0 0
Williams	2,122 0 0

For building two houses at Wood Green. Mr. Bartlett, architect:—

Braggar	£1,048 0 0
Williams	954 0 0
Harradine	900 0 0
Wood	790 0 0
Patman	786 0 0
Clarke	769 0 0